

SAUGET AREA 1

EE/CA - RI/FS SUPPORT SAMPLING PLAN

LEACHATE TREATABILITY TESTS

Prepared for:

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- 1 Analytical Reports for Combined Leachate Sample from July 26, 2000
- 2 Analytical Reports for Site I and G Samples on April 25 and 26, 2000
- 3 Analytical Data for Activated Carbon Adsorption Tests
- 4 Analytical Data for Chemical Precipitation Jar Tests
- 5 Analytical Data for Activated Sludge Batch Tests
- 6 Analytical Data for Batch Oxidation Tests
- 7 Analytical Data for Batch Filtration Tests

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1.0 INTRODUCTION

1.1 PURPOSE

Solutia Inc. (Solutia) is conducting the Sauget Area 1 EE/CA and RI/FS Support Sampling Plan in Sauget and Cahokia, Illinois. Section 12-5 of the Support Sampling Plan, Leachate Treatment Pilot Treatability Tests, is given below:

Leachate treatability pilot tests will be conducted on samples collected from Sites G and I to determine if pretreatment limits can be achieved prior to discharge to the American Bottoms POTW. One leachate sample will be collected from Site I and one leachate sample will be collected from Site G using the 2-inch diameter well installed at each of these fill areas as part of the Waste Characterization Sampling Plan. As required by USACE, these wells will be stressed so that a representative leachate sample can be collected. Pumping will be limited by constraints imposed by leachate storage and disposal requirements. Pilot treatability testing will be conducted by the Advent Group, Brentwood, Tennessee.

The purpose of the testing reported was to evaluate the feasibility of a number of technologies to treat leachate from one well at Site G and one well at Site I.

1.2 BACKGROUND¹

Site G is located south of Queeny Avenue, east of (and possibly under) the Wiese Engineering facility, and north of a cultivated field in the Village of Sauget. Segment CS-B of Dead Creek is located along the eastern boundary of Site G. Site G is approximately 5 acres and was operated as a landfill from approximately 1952 to 1966. The site was subject to intermittent dumping thereafter until 1988, when the site was fenced pursuant to a USEPA removal action under CERCLA. There is an estimated 60,000 cubic yards of wastes within Site G, including oil pits, drums containing wastes, paper wastes, documents, and lab equipment.

¹ Background from Sauget Area 1 Sampling Plan by O'Brien & Gere Engineers, Inc., June 1999.

Site I is located north of Queeny Avenue, west of Falling Springs Road and south of the Alton & Southern Railroad in the Village of Sauget and occupies approximately 19 acres. Segment CS-A of Dead Creek borders Site I on the western side. The site is currently graded and covered with crushed stone and used for equipment and truck parking. Site I was originally used as a sand and gravel pit, which received industrial and municipal wastes. Site I is connected to Site H under Queeny Avenue and together they were known to be part of the "Sauget-Monsanto Landfill." The landfill operated from approximately 1931 to 1957. Site I contains approximately 250,000 cubic yards of wastes and fill material.

The Site G and Site I leachates are believed to potentially contain volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, herbicides, polychlorinated biphenyls (PCBs), cyanide (CN), dioxin, and metals, including mercury (Hg).

1.3 REPORT ORGANIZATION

Chapter 1.0 provides background information for this project. Chapter 2.0 describes the design of the testing program, including defining the project objectives, identifying the technologies tested, and specifying the analytical methods used. Initial sample characterization data are presented in Chapter 3.0. Test results are presented in Chapter 4.0. Results, including full-scale design implications, are discussed in Chapter 5.0.

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2.0 TESTING PROGRAM DESIGN

2.1 PROJECT OBJECTIVES

The purpose of this project was to screen the feasibility of technically sound, operationally reliable, and cost-effective technologies for treating the Sauget Area 1 leachate prior to discharge to the American Bottoms POTW. Pretreatment requirements for the American Bottoms POTW are established to prevent pass through and interference. Achieving the lowest possible concentration should allow treated Sauget Area 1 leachate to meet the pretreatment requirements. Thus, the treatment goal for the treatability tests was to determine the lowest achievable batch effluent concentration. The following specific objectives were established for the bench-scale treatability testing program.

- Test selected technologies and collect samples for appropriate analyses to determine the lowest achievable batch effluent concentration ; and,
- Gain insight into potential full-scale system process conditions, operating parameters, and process-related information, such as emissions/residuals control.

2.2 TESTING PROGRAM OVERVIEW

Representative samples of Site G and Site I leachate were collected and shipped to ADVENT's treatability testing laboratory in Nashville, Tennessee. The two samples were combined in a 50:50 volume ratio and characterized.

Five technologies were tested for the following target parameters:

Treatment Technology	Target Parameters								
	VOCs	SVOCs	Metals	Hg	CN	PCBs	Pesticides	Herbicides	Dioxin
Chemical Precipitation			X	X					
Oxidation	X	X			X		X	X	X
Filtration						X			
Activated Carbon Adsorption	X	X	X	X		X	X	X	X
Biological Treatment	X	X					X	X	

Treatment technology test methods were as follows:

Treatment Technology	Batch Test Method
• Chemical precipitation using lime and caustic	• Jar tests
• Oxidation with hydrogen peroxide and ozone	• Jar tests
• Filtration	• Filtration using various pore sizes
• Activated carbon adsorption	• Isotherm & short-term column tests
• Biological treatment	• Batch Tests

2.3 ANALYTICAL PROCEDURES

With the exception of dioxins, the analytical work was performed by STL Savannah Laboratories (Savannah) of Savannah, Georgia. Dioxin analyses were performed by Triangle Laboratories, Inc. (Triangle) of Durham, North Carolina. These laboratories were selected since they had already analyzed groundwater from the fill areas at the site. It was assumed that their familiarity with the sample matrix would allow them to achieve the lowest possible Method Detection Levels (MDLs). The laboratory analytical methods used by Savannah and Triangle are presented in Table 2-1.

Some treatability screening analyses were conducted by ADVENT using methods based on *Standard Methods for the Examination of Waters and Wastewaters* or Hach test methods. The purpose of these analyses was to monitor the progress of the tests. Data interpretation relative to the effectiveness of a technology is based upon the Savannah and Triangle data.

Samples were shipped in bottles provided by the laboratories in accordance with instructions provided by Savannah and Triangle. Chain of custody forms accompanied the samples.

The laboratories were instructed to follow their own internal Quality Assurance/Quality Control (QA/QC) programs.

In the following sections, the analytical data from Savannah and Triangle is summarized. For clarity, the Savannah sample identification numbers are included in each table. An

"RE" designation is a rerun and a "DL" indicates a diluted sample. Laboratory data flags are also included and explained in table footnotes.

Analyses reported in the following sections are by Savannah or Triangle unless noted otherwise.

TABLE 2-1. SUMMARY OF ANALYTICAL METHODS

PARAMETER	ANALYSIS METHOD	CONTAINER TYPE	PRESERVATIVE	HOLD TIME (days)
Soluble TOC	415.1	P,G	H ₂ SO ₄ , 4 °C	28
Total COD	410.1, 410.2	P,G	H ₂ SO ₄ , 4 °C	28
Soluble COD	EPA 410.4	P,G	H ₂ SO ₄ , 4 °C	28
Total BOD	EPA 405.1	P,G	4 °C	2
Soluble BOD	EPA 405.1	P,G	4 °C	2
TSS	EPA 160.2	P,G	4 °C	7
VSS	160.4	P,G	4 °C	7
TDS	EPA 160.1	P,G	4 °C	7
TDIS	2540C/E	P,G	4 °C	7
Total TKN	EPA 351.2, 351.3	P,G	H ₂ SO ₄ , 4 °C	28
Soluble TKN	EPA 351.2	P,G	H ₂ SO ₄ , 4 °C	28
NH ₃ -N	EPA 350.2	P,G	H ₂ SO ₄ , 4 °C	28
NO ₂ -N	EPA 353.2	P,G	4 °C	2
NO ₃ -N	EPA 353.2	P,G	4 °C	28
PO ₄ -P	EPA 365.2	P,G	H ₂ SO ₄ , 4 °C	28
Alkalinity	EPA 310.1	P,G	4 °C	1
Hardness	130.2	P,G	4 °C	7
Chloride	EPA 325.2	P,G	4 °C	28
Soluble Iron	EPA 6010A	P,G	H ₂ SO ₄ , 4 °C	180
Total Iron	EPA 200.7	P,G	H ₂ SO ₄ , 4 °C	180
Color	EPA 110.3	G	4 °C	0
Volatiles	EPA 8260B	G	HCl, 4 °C	14
Semi-Volatiles	EPA 8270C	G	4 °C	14
Metals	EPA 6010A	P,G	HNO ₃ , 4 °C	14
Cyanide	335.3	P	NaOH, 4 °C	14
Herbicides	EPA 8151A	G	4 °C	14
pH	EPA 150.1	P,G	None	0
Pesticides	8081A	G	None	7
Dioxin	8290	G	None	30
Mercury	7470A	P,G	HNO ₃ , 4 °C	28
Zinc	289.1/289.2/6010	P,G	HNO ₃ , 4 °C	180
Sulfate	375.4	P,G	IMM	IMM
PCBs	680/8082	G	None	7

BOD = Biochemical Oxygen Demand

TDS = Total Dissolved Solids

COD = Chemical Oxygen Demand

TSS = Total Suspended Solids

TOC = Total Organic Carbon

TKN = Total Kjeldahl Nitrogen

PO₄-P = Ortho-phosphate

P = Polyethylene

G = Glass

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3.0 LEACHATE COLLECTION AND CHARACTERIZATION

3.1 LEACHATE SAMPLE COLLECTION

Leachate samples were collected from Sauget Area 1 by O'Brien and Gere Engineers, Inc. of St. Louis, Missouri. The samples were collected on Wednesday, July 19, 2000. Twenty-five gallons of leachate were collected from both Site G and Site I. The leachate was collected into 1-gallon plastic containers, placed in coolers and transported to ADVENT's treatability testing laboratory in Nashville, Tennessee.

ADVENT received the samples on July 21, 2000. Upon receipt, the samples were placed in ADVENT's walk-in storage cooler maintained at 4 °C. On July 25, 2000, the Site G and I samples were composited into a 55-gallon polyethylene drum. Characterization samples were collected and shipped to Savannah and Triangle Laboratories on July 26, 2000. The remaining sample volume was placed in refrigerated storage for treatability testing. A filtered (0.45 µm) sample was shipped to Savannah on August 1, 2000.

3.2 LEACHATE SAMPLE CHARACTERIZATION

The combined leachate sample characterization data from Savannah and Triangle are provided in Table 3-1. For comparison, earlier analytical results (April 25 and 26, 2000) from Site G and Site I made available to ADVENT are also presented in Table 3-2. Analytical data reports for Tables 3-1 and 3-2 are provided in Attachments 1 and 2.

The conventional organic and salt characteristics of the leachate samples were as follows:

Parameter	Units	Combined Leachate July 26, 2000	Site I Leachate April 25, 2000	Site G Leachate April 26, 2000
TSS	mg/L	260	3,000	180
BOD	mg/L	610	300	1,900
TDS	mg/L	3,100	4,000	2,800
TOC	mg/L	520	420	1,400
COD	mg/L	1,600	1,200	3,000
NH ₃ -N	mg/L	No lab analysis	17	16
TKN	mg/L	39	42	39

The COD, TOC, and BOD results show that the water has a significant organic content. The BOD concentration of 610 mg/L demonstrates that a portion of that content is biodegradable. Ammonia was measured at 17 and 16 mg/L in the Site I and Site G leachate samples collected in April 2000, respectively, indicating that approximately half of the TKN is present as organic nitrogen.

Upon visual inspection, solids were not apparent in the combined leachate water. This is most likely due to the solids being too fine to see. The combined leachate was thoroughly mixed prior to sample collection and characterization.

The following data shows a comparison of certain metals in Site I and G leachate as well as the combined leachate:

Parameter	Units	Combined Leachate July 26, 2000	Site I Leachate April 25, 2000	Site G Leachate April 26, 2000
Aluminum	mg/L	0.43	3.3	1.12
Barium	mg/L	0.38	1.0	0.73
Chromium	mg/L	0.65	0.055	0.61
Cobalt	mg/L	0.3	0.02	1.4
Iron	mg/L	130	23	280
Manganese	mg/L	3.3	0.71	4.9
Nickel	mg/L	0.12	1.3	0.019
Zinc	mg/L	0.84	0.35	1.8

Iron showed the highest concentration in all three samples. Nickel showed the lowest concentration in the Site G and combined leachate samples, while cobalt had the lowest concentration in the Site I leachate. In addition, cyanide concentration was measured for the combined leachate and found to be 0.012 mg/L

An approximate ion balance for the July 26, 2000 combined leachate sample is as follows:

Concentration			
Ions	(mg/L)	(mg/meq)	(meq/L)
<u>Cations</u>			
Calcium	490	20.0	24.5
Potassium	34	39.1	0.9
Magnesium	75	12.2	6.2
Sodium	230	23.0	<u>10.0</u> 41.6
<u>Anions</u>			
Sulfate	330	48.0	6.9
Chloride	610	35.5	17.2
Bi-Carbonate	770	61.0	<u>12.6</u> 36.7

Significant concentrations of a wide range of volatile and semivolatile organics were detected including:

Parameter	Units	Combined Leachate July 26, 2000	Site I Leachate April 25, 2000	Site G Leachate April 26, 2000
Phenol	µg/L	4,500	6,700	16,000
2-chlorophenol	µg/L	450	400	1,100
1,4-Dichlorobenzene	µg/L	570	990	220 J
1,2-Dichlorobenzene	µg/L	350	560	280 J
2,4-Dichlorophenol	µg/L	1,500	2,600	NA
1,2,4-Trichlorobenzene	µg/L	2,900	3,200	44 J
Naphthalene	µg/L	<250	2,500	1,000
4-Chloroaniline	µg/L	7,700	NA	NA
Pentachlorophenol	µg/L	5,200	6,300	7,600
Acetone	µg/L	44,000 E	10,000 E	730
1,1-Dichloroethane	µg/L	1,500 E	3,700	NA
Cis/Trans-1,2-Dichloroethene	µg/L	4,000 E	12,000 E	1,900 E
1,1,1-Trichloroethane	µg/L	3,700 E	10,000 E	NA
Trichloroethene	µg/L	380	620	340
Benzene	µg/L	530 E	690	880
4-methyl-2-pentanone	µg/L	840	1,600	930
Chlorobenzene	µg/L	1,200 E	950	2,800 E

Notes:

J = Estimate value

NA = No Analysis

E = Exceeded upper level of calibration range.

Polychlorinated Biphenyls (PCBs) were detected in the leachate samples. The following compounds showed the highest concentrations in the combined leachate, but were still below the concentrations found in the Site I and G leachate in April, 2000.

Parameter	Units	Combined Leachate July 26, 2000	Site I Leachate April 25, 2000	Site G Leachate April 26, 2000
Pentachlorobiphenyl	µg/L	3.1	37	5.4 J
Hexachlorobiphenyl	µg/L	2.9	3.8	NA
Heptachlorobiphenyl	µg/L	0.95	11	NA

Notes:

J = Estimate value

NA = No analysis

Chlorinated pesticides and herbicides results were reported by Savannah. Most results were flagged as estimated values and/or results because the relative percent difference between the two GC columns exceeded 40 percent. The only result not flagged was the chlorinated pesticide alpha BHC result of 2.5 µg/L for Site I leachate. Chlorinated pesticides analyses were not conducted on the combined leachate sample.

The following dioxins were detected in the combined leachate sample at concentrations greater than 1,000,000 parts per quadrillion (ppq).

Parameter	Units	Combined Leachate July 26, 2000	Site I Leachate May 30, 2000	Site G Leachate May 16, 2000
12346789-OCDD	ppq	3,457,430	198,030	4,490
12346789-OCDF	ppq	2,148,820	29,830	1,470
Total HpCDD	ppq	1,969,730	40,400	1,050
Total HpCDF	ppq	1,069,270	21,700	973

Overall, the combined leachate sample was deemed representative of the site for use in this study.

TABLE 3-1. SUMMARY OF COMBINED SITE G AND SITE I LEACHATE SAMPLES FOR JULY 19, 2000 (a,b,c)

PARAMETER	METHOD	UNITS	SAMPLE ID				ADVENT INITIAL CHARACTER- IZATION DATA (d)
			SAUGET LEACHATE 26-Jul-00			SAUGET LEACHAT 8/1/2000	
			05021-1	05021-1-RE	05021-1-DL	05204-17 (filtered)	02705-4
METALS							
Aluminum	6010	mg/L	0.43			<0.2	
Antimony	6010	mg/L	<0.02			<0.02	
Arsenic	6010	mg/L	0.011			0.0061 B	
Barium	6010	mg/L	0.38			0.16	
Beryllium	6010	mg/L	<0.004			<0.004	
Cadmium	6010	mg/L	0.0026			0.0033 B	
Calcium	6010	mg/L	490			480	
Chromium	6010	mg/L	0.650			0.27	
Cobalt	6010	mg/L	0.300			0.28	
Copper	6010	mg/L	0.0078			0.0014 B	
Iron	6010	mg/L	130			64	
Potassium	6010	mg/L	34			33	
Lead	6010	mg/L	0.07			<0.005	
Magnesium	6010	mg/L	75			74	
Manganese	6010	mg/L	3.3			3.2	
Molybdenum	6010	mg/L	0.0450			0.036	
Mercury	6010	mg/L	0.0013			0.00063	
Nickel	6010	mg/L	0.12			0.067	
Selenium	6010	mg/L	0.0043			<0.01	
Silver	6010	mg/L	0.01			<0.01	
Sodium	6010	mg/L	230			220	
Thallium	6010	mg/L	<0.01			<0.01	
Vanadium	6010	mg/L	0.1			0.0066 B	
Zinc	6010	mg/L	0.84			0.64	
CL SEMIVOLATILES							
Phenol	8270	µg/L	4500				
bis (2-Chloroethyl) ether	8270	µg/L	<250				
2-Chlorophenol	8270	µg/L	450				
1,3-Dichlorobenzene	8270	µg/L	<250				
1,4-Dichlorobenzene	8270	µg/L	570				
1,2-Dichlorobenzene	8270	µg/L	350				
2-Methylphenol (o-Cresol)	8270	µg/L	110				
2,2'-Oxybis(1-Chloropropane)	8270	µg/L	<250				
3-Methylphenol/4-Methyl-phenol (m&p Cresol)	8270	µg/L	<460				
N-Nitroso-di-n-propylamine	8270	µg/L	<250				
Hexachloroethane	8270	µg/L	<48				
Nitrobenzene	8270	µg/L	<88				
Isophorone	8270	µg/L	<250				
2-Nitrophenol	8270	µg/L	<250				
bis (2-Chloroethoxy)methane	8270	µg/L	<250				
2,4-Dichlorophenol	8270	µg/L	1500				
1,2,4-Trichlorobenzene	8270	µg/L	2900				
Naphthalene	8270	µg/L	<250				
Hexachlorobutadiene	8270	µg/L	<250				
4-Chloroaniline	8270	µg/L	7700				
4-Chloro-3-methylphenol	8270	µg/L	<250				
2-Methylnaphthalene	8270	µg/L	<250				
Hexachlorocyclopentadiene	8270	µg/L	<250				
2,4,6-Trichlorophenol	8270	µg/L	<52				
5-Trichlorophenol	8270	µg/L	<250				
4-Chloronaphthalene	8270	µg/L	<250				
2-Nitroaniline	8270	µg/L	<1200				
methylphthalate	8270	µg/L	<250				
benaphthalene	8270	µg/L	<250				

TABLE 3-1. SUMMARY OF COMBINED SITE G AND SITE I LEACHATE SAMPLES FOR JULY 19, 2000 (a,b,c)

PARAMETER	METHOD	UNITS	SAMPLE ID					ADVENT INITIAL CHARACTER- IZATION DATA (d)
			SAUGET LEACHATE 26-Jul-00			SAUGET LEACHAT 8/1/2000	TRIP BLANK 26-Jul-00	
			05021-1	05021-1-RE	05021-1-DL	05204-17 (filtered)	02705-4	
3-Nitroaniline	8270	µg/L	<1200					
Acenaphthene	8270	µg/L	<250					
2,4-Dinitrophenol	8270	µg/L	<350					
4-Nitrophenol	8270	µg/L	130					
Dibenzofuran	8270	µg/L	<250					
Diethylphthalate	8270	µg/L	42					
2,4-Dinitrotoluene	8270	µg/L	<250					
2,6-Dinitrotoluene	8270	µg/L	<250					
4-Chlorophenylphenyl ether	8270	µg/L	<250					
Fluorene	8270	µg/L	<25					
4-Nitroaniline	8270	µg/L	<1200					
4,6-Dinitro-2-methylphenol	8270	µg/L	<320					
N-Nitrosodiphenylamine	8270	µg/L	<120					
4-Bromophenylphenyl ether	8270	µg/L	<25					
Hexachlorobenzene	8270	µg/L	260					
Pentachlorophenol	8270	µg/L	5200					
Phenanthrene	8270	µg/L	14					
Anthracene	8270	µg/L	<250					
Di-n-butylphthalate	8270	µg/L	<250					
Fluoranthene	8270	µg/L	72					
Pyrene	8270	µg/L	86					
o-phenylbenzylphthalate	8270	µg/L	<250					
,,3'-Dichlorobenzidine	8270	µg/L	<500					
Benzo (a) anthracene	8270	µg/L	51					
His (2-Ethylhexyl) phthalate	8270	µg/L	56					
Styrene	8270	µg/L	63					
o-n-octylphthalate	8270	µg/L	<250					
Benzo (b) fluoranthene	8270	µg/L	41					
Benzo (k) fluoranthene	8270	µg/L	40					
Benzo (a) pyrene	8270	µg/L	53					
Indeno (1,2,3-cd) pyrene	8270	µg/L	<250					
Dibenzo (a,h) anthracene	8270	µg/L	<250					
Benzo (g,h, i) perylene	8270	µg/L	32					
Carbazole	8270	µg/L	<85					
POLYCHLORINATED BIPHENYLS								
Monochlorobiphenyl	680	µg/L	0.36					
Dichlorobiphenyl	680	µg/L	0.1					
Trichlorobiphenyl	680	µg/L	0.08 J					
Tetrachlorobiphenyl	680	µg/L	0.91					
Pentachlorobiphenyl	680	µg/L	3.1					
Hexachlorobiphenyl	680	µg/L	2.9					
Heptachlorobiphenyl	680	µg/L	0.95					
Octachlorobiphenyl	680	µg/L	0.3					
Nonachlorobiphenyl	680	µg/L	<0.5					
Decachlorobiphenyl	680	µg/L	<0.5					
Aroclor-1016	8082	µg/L	<1.0	<1.0				
Aroclor-1016	8082	µg/L	<2.0	<2.0				
Aroclor-1016	8082	µg/L	<1.0	<1.0				
Aroclor-1016	8082	µg/L	<1.0	<1.0				
Aroclor-1016	8082	µg/L	<1.0	<1.0				
Aroclor-1016	8082	µg/L	5.3	<1.0				
Aroclor-1016	8082	µg/L	8.2	<1.0				
PESTICIDES/PCB								
Aldrin	8081	µg/L	<25					
alpha-BHC	8081	µg/L	<20					
gamma-BHC (Lindane)	8081	µg/L	<9.5					
beta-BHC	8081	µg/L	<6					

TABLE 3-1. SUMMARY OF COMBINED SITE G AND SITE I LEACHATE SAMPLES FOR JULY 19, 2000 (a,b,c)

PARAMETER	METHOD	UNITS	SAMPLE ID					ADVENT INITIAL CHARACTER- IZATION DATA (d)
			SAUGET LEACHATE 26-Jul-00			SAUGET LEACHAT 8/1/2000	TRIP BLANK 26-Jul-00	
			05021-1	05021-1-RE	05021-1-DL	05204-17 (filtered)	02705-4	
Dieldrin	8081	µg/L	<50					
Heptachlor	8081	µg/L	<25					
Heptachlor epoxide	8081	µg/L	<25					
CHLORINATED HERBICIDES								
2,4-D	8151	µg/L	<2200 EP		2.200 D			
2,4-DB	8151	µg/L	<25		<1000			
2,4,5-T	8151	µg/L	170 P		<130 DJP			
2,4,5-TP	8151	µg/L	<25		<1000			
Dalapon	8151	µg/L	<6000		<240000			
Dicamba	8151	µg/L	<60		<2400			
Dichloroprop	8151	µg/L	<300		<12000			
Dinoseb	8151	µg/L	<300		<12000			
MCPP (2-(4-chloro-2-methyl- phenoxy)-propanoic acid)	8151	µg/L	<11000 P		<240000			
MCPA ((4-Chloro-2-methyl- phenoxy)-acetic acid)	8151	µg/L	<6000		<240000			
Pentachlorophenol	8151	µg/L	760 E		820 DJ			
VOLATILES								
Chloromethane	8260	µg/L	<20		<400			
Bromomethane	8260	µg/L	<20		<390			
Vinyl chloride	8260	µg/L	88		77 DJ			
'oroethane	8260	µg/L	<20		<400			
.thylene chloride	8260	µg/L	7.1 JB		<190			
Acetone	8260	µg/L	44000 E		6300 DJ			
Carbon Disulfide	8260	µg/L	10		<200			
'-Dichloroethene	8260	µg/L	180		140 DJ			
-1-Dichloroethane	8260	µg/L	1500 E		1800 D			
Cis/Trans-1, 2-Dichloroethene	8260	µg/L	4000 E		5700 D			
1,2-Dichloroethane	8260	µg/L	10		<200			
2-Butanone	8260	µg/L	65		<1000			
Chloroform	8260	µg/L	16		<200			
1,1,1-Trichloroethane	8260	µg/L	3700 E		5000 D			
Carbon Tetrachloride	8260	µg/L	<10		<200			
Bromodichloromethane	8260	µg/L	<10		<200			
1,1,2,2-Tetrachloroethane	8260	µg/L	<10		<200			
1,2-Dichloropropane	8260	µg/L	2.4 JB		<200			
Trans-1,3-Dichloropropene	8260	µg/L	<10		<200			
Trichloroethene	8260	µg/L	380		370 D			
1,1,2-Trichloroethane	8260	µg/L	17		<200			
Benzene	8260	µg/L	530 E		580 D			
Cis-1,3-Dichloropropene	8260	µg/L	<2		<40			
Bromoform	8260	µg/L	<10		<200			
2-Hexanone	8260	µg/L	<50		<1000			
4-Methyl-2-pentanone	8260	µg/L	840		620 DJ			
Tetrachloroethene	8260	µg/L	25		<200			
Toluene	8260	µg/L	250		240 D			
Chlorobenzene	8260	µg/L	1200 E		1400 D			
Ethylbenzene	8260	µg/L	52		54 DJ			
Xylenes, Total	8260	µg/L	<76		<200			
Styrene	8260	µg/L	<10		<200			
CONVENTIONALS								
Nitrate, Total	335.3	mg/L	0.012					
Pended Solids	160.2	mg/L	260					126
Biochemical Oxygen Demand	405.1/5210	mg/L	610					
Total Dissolved Solids	160.1	mg/L	3100					
Volatile Solids	160.4	mg/L	70					
al Organic Carbon	415.1	mg/L	520					

TABLE 3-1. SUMMARY OF COMBINED SITE G AND SITE I LEACHATE SAMPLES FOR JULY 19, 2000 (a,b,c)

PARAMETER	METHOD	UNITS	SAMPLE ID				ADVENT INITIAL CHARACTER- IZATION DATA (d)	
			SAUGET LEACHATE 26-Jul-00			TRIP BLANK 26-Jul-00		
			05021-1	05021-1-RE	05021-1-DL	05204-17 (filtered)	02705-4	
Chemical Oxygen Demand	410.1	mg/L	1600					1,779
Total Kjeldahl Nitrogen-N	351.2	mg/L	39					
Nitrate-N	353.2	mg/L	0.056					
Ammonia (as N)	350.1	mg/L						24
Sulfate as SO ₄	300.0	mg/L	330					
Nitrite-N	353.2	mg/L	<0.05					0
Chloride	325.2	mg/L	610					
pH	150.1	s.u.						6.5
Specific Conductance	120.1	mhos/c	4300					3,650
Ortho-Phosphate-P	365.1	mg/L	0.2					1.25
Color, True	110.2	PCU	880					
Total Dissolved Inorganic Solids	2540C/E	mg/L	960					
Alkalinity (as CaCO ₃)	310.1	mg/L	770					
DIOXINS								
2378-TCDD	MIT2	ppq	<0.5					
12378-PeCDD	MIT2	ppq	<0.5					
123478-HxCDD	MIT2	ppq	<1.0					
123678-HxCDD	MIT2	ppq	24680					
123789-HxCDD	MIT2	ppq	5770					
1234678-HpCDD	MIT2	ppq	727290					
12346789-OCDD	MIT2	ppq	3457430					
178-TCDF	MIT2	ppq	1510					
1378-PeCDF	MIT2	ppq	943					
23478-PeCDF	MIT2	ppq	948					
123478-HxCDF	MIT2	ppq	18280					
23678-HxCDF	MIT2	ppq	4650					
34678-HxCDF	MIT2	ppq	3250					
123789-HxCDF	MIT2	ppq	<0.6					
1234678-HpCDF	MIT2	ppq	235140					
1234789-HpCDF	MIT2	ppq	28770					
12346789-OCDF	MIT2	ppq	2148820					
TOTAL TCDD	MIT2	ppq	5170					
TOTAL PeCDD	MIT2	ppq	390					
TOTAL HxCDD	MIT2	ppq	108350					
TOTAL HpCDD	MIT2	ppq	1969730					
TOTAL TCDF	MIT2	ppq	6210					
TOTAL PeCDF	MIT2	ppq	5260					
TOTAL HxCDF	MIT2	ppq	111810					
TOTAL HpCDF	MIT2	ppq	1067270					

Notes:

(a) Dioxins analyzed by Triangle Laboratories, Durham, North Carolina. All other analyses by Savannah Laboratories, Savannah, Georgia.

(b) Definition of Organic Data Qualifiers.

(c) <MDL = Not detected RE = Rerun DL = Dilution

(d) Initial characterization analysis done by ADVENT.

J This flag indicates an estimated value. This flag used (1) when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the CRQL but greater than zero, and (3) when the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL but greater than zero.

P This flag is used for pesticide/Aroclor target analyte when there is greater than 40% RPD for detected concentrations between the two GC columns.

B This flag is used when the analyte is found in the associated method blank as well as in the sample.

E This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

- If a sample or extract is reanalyzed at a higher dilution factor, the DL suffix is appended to the sample number of the Form I for the more diluted sample, and all reported concentrations on that Form I are flagged with the D flag.

X Laboratory defined flag.

S This flag indicates that the reported value was determined by the Method of Standard Additions (MSA).

TABLE 3-2. SUMMARY OF SITE G AND I LEACHATE SAMPLING RESULTS FOR APRIL 25 TO 26, 2000 (a,b)

PARAMETER	METHOD	UNITS	SAMPLE ID							
			LEACH-I-1 25-Apr-2000			LEACH-G-1 26-Apr-2000		TRIP BLANK 25-Apr-00	LEACH I-1 25-Apr-00	LEACH G-1 26-Apr-00
			02705-1	02705-1-RE	02705-1-DL	02705-2	02705-2-RE	02705-4	T002630	T002394
METALS										
Aluminum	6010	mg/L	3.3			0.12 B				
Antimony	6010	mg/L	<0.02			0.0060 B				
Arsenic	6010	mg/L	0.031			0.019				
Barium	6010	mg/L	1.0			0.73				
Beryllium	6010	mg/L	<0.004			<0.004				
Cadmium	6010	mg/L	<0.005			0.0038 B				
Calcium	6010	mg/L	83			720				
Chromium	6010	mg/L	0.055			0.61				
Cobalt	6010	mg/L	0.020			1.4				
Copper	6010	mg/L	0.047			0.0036 B				
Iron	6010	mg/L	23			280				
Potassium	6010	mg/L	8.4 E			28 E				
Lead	6010	mg/L	0.58			0.0033 B				
Magnesium	6010	mg/L	18			77				
Manganese	6010	mg/L	0.71			4.9				
Molybdenum	6010	mg/L	0.0045 B			0.099				
Mercury	6010	mg/L	0.018 S			<0.0002				
Nickel	6010	mg/L	1.3			0.019 B				
Selenium	6010	mg/L	<0.01			0.0074 B				
Silver	6010	mg/L	<0.01			<0.01				
Sodium	6010	mg/L	63			210				
Thallium	6010	mg/L	<0.01			<0.01				
Tin	6010	mg/L	0.012 B			0.016 B				
Vanadium	6010	mg/L	0.048			0.62				
Zinc	6010	mg/L	0.35			1.8				
TCL SEMIVOLATILES										
Phenol	8270	µg/L	6700	5400		16000	11000			
bis (2-Chloroethyl) ether	8270	µg/L	<330	<250		<1000	<1000			
2-Chlorophenol	8270	µg/L	460	350		1,100	850 J			
1,3-Dichlorobenzene	8270	µg/L	<330	<250		<1000	<1000			
1,4-Dichlorobenzene	8270	µg/L	990	770		220 J	170 J			
1,2-Dichlorobenzene	8270	µg/L	560	420		280 J	220 J			
2-Methylphenol (o-Cresol)	8270	µg/L	210 J	<250		200 J	110 J			
2,2'-Oxybis(1-Chloropropane)	8270	µg/L	<330	<250		<1000	<1000			
3-Methylphenol/4-Methyl-phenol (m&p Cresol)	8270	µg/L	630	590		1400	880 J			
N-Nitroso-di-n-propylamine	8270	µg/L	<330	<250		<1000	<1000			
Hexachloroethane	8270	µg/L	<63	<48		<190	<190			

TABLE 3-2. SUMMARY OF SITE G AND I LEACHATE SAMPLING RESULTS FOR APRIL 25 TO 26, 2000 (a,b)

PARAMETER	METHOD	UNITS	SAMPLE ID							
			LEACH-I-1 25-Apr-2000			LEACH-G-1 26-Apr-2000		TRIP BLANK 25-Apr-00	LEACH I-1 25-Apr-00	LEACH G-1 26-Apr-00
			02705-1	02705-1-RE	02705-1-DL	02705-2	02705-2-RE	02705-4	T002630	T002394
Nitrobenzene	8270	µg/L	<120	<88		<350	<350			
Isophorone	8270	µg/L	<330	<250		<1000	<1000			
2-Nitrophenol	8270	µg/L	<330	<250		<1000	<1000			
bis (2-Chloroethoxy)methane	8270	µg/L	<330	<250		<1000	<1000			
2,4-Dichlorophenol	8270	µg/L	2600	2200		<1000	<1000			
1,2,4-Trichlorobenzene	8270	µg/L	3200	2400	44 J	<1000				
Naphthalene	8270	µg/L	2500	1800		1000	4,500			
Hexachlorobutadiene	8270	µg/L	<330	<250		<1000	<1000			
4-Chloroaniline	8270	µg/L	<670	7200		<2000	3500			
4-Chloro-3-methylphenol	8270	µg/L	<330	<250		<1000	<1000			
2-Methylnaphthalene	8270	µg/L	<330	<250		<1000	<1000			
Hexachlorocyclopentadiene	8270	µg/L	<330	<250		<1000	<1000			
2,4,6-Trichlorophenol	8270	µg/L	1300	<52		<210	<210			
2,4,5-Trichlorophenol	8270	µg/L	<330	<250		<1000	<1000			
2-Chloronaphthalene	8270	µg/L	<330	<250		<1000	<1000			
2-Nitroaniline	8270	µg/L	<1700	<1200		<5000	<5000			
Dimethylphthalate	8270	µg/L	<330	<250		<1000	<1000			
Acenaphthalene	8270	µg/L	<330	<250		<1000	<1000			
3-Nitroaniline	8270	µg/L	<1700	<1200		<5000	<5000			
Acenaphthene	8270	µg/L	<330	<250		<1000	<1000			
2,4-Dinitrophenol	8270	µg/L	<470	<350		<1400	<1400			
4-Nitrophenol	8270	µg/L	<1700	<1200		<5000	<5000			
Dibenzofuran	8270	µg/L	<330	<250		<1000	<1000			
Diethylphthalate	8270	µg/L	<330	53 J		<1000	<1000			
2,4-Dinitrotoluene	8270	µg/L	<330	<250		<1000	<1000			
2,6-Dinitrotoluene	8270	µg/L	<330	<250		<1000	<1000			
4-Chlorophenylphenyl ether	8270	µg/L	<330	<250		<1000	<1000			
Fluorene	8270	µg/L	<33	<25		<100	<100			
4-Nitroaniline	8270	µg/L	<1700	<1200		<5000	<5000			
4,6-Dinitro-2-methylphenol	8270	µg/L	<430	<320		<1300	<1300			
N-Nitrosodiphenylamine	8270	µg/L	<170	<120		<500	<500			
4-Bromophenylphenyl ether	8270	µg/L	<33	<25		<100	<100			
Hexachlorobenzene	8270	µg/L	<330	130 J		<1000	<1000			
Pentachlorophenol	8270	µg/L	6300	4800		7600	6800			
Phenanthrene	8270	µg/L	<330	<250		<1000	<1000			
Anthracene	8270	µg/L	<330	<250		<1000	<1000			
Di-n-butylphthalate	8270	µg/L	<330	<250		<1000	<1000			
Fluoranthene	8270	µg/L	<330	<250		<1000	<1000			
Pyrene	8270	µg/L	<330	<250		<1000	<1000			
Butylbenzylphthalate	8270	µg/L	<330	<250		<1000	<1000			

TABLE 3-2. SUMMARY OF SITE G AND I LEACHATE SAMPLING RESULTS FOR APRIL 25 TO 26, 2000 (a,b)

PARAMETER	METHOD	UNITS	SAMPLE ID							
			LEACH-I-1 25-Apr-2000			LEACH-G-1 26-Apr-2000		TRIP BLANK 25-Apr-00	LEACH I-1 25-Apr-00	LEACH G-1 26-Apr-00
			02705-1	02705-1-RE	02705-1-DL	02705-2	02705-2-RE	02705-4	T002630	T002394
3,3'-Dichlorobenzidine	8270	µg/L	<670	<500		<2000	<2000			
Benzo (a) anthracene	8270	µg/L	22 JB	<250		<1000	<1000			
bis (2-Ethylhexyl) phthalate	8270	µg/L	30 JB	<45		<180	<180			
Chrysene	8270	µg/L	23 JB	<250		<1000	<1000			
Di-n-octylphthalate	8270	µg/L	<330	<250		<1000	<1000			
Benzo (b) fluoranthene	8270	µg/L	<330	<250		<1000	<1000			
Benzo (k) fluoranthene	8270	µg/L	<330	<250		<1000	<1000			
Benzo (a) pyrene	8270	µg/L	<330	<250		<1000	<1000			
Indeno (1,2,3-cd) pyrene	8270	µg/L	<330	<250		<1000	<1000			
Dibenzo (a,h) anthracene	8270	µg/L	<330	<250		<1000	<1000			
Benzo (g,h, l) perylene	8270	µg/L	<330	<250		<1000	<1000			
Carbazole	8270	µg/L	<110	<85		<340	<340			
POLYCHLORINATED BIPHENYLS										
Monochlorobiphenyl	680	µg/L	3.8			<10				
Dichlorobiphenyl	680	µg/L	2.3			<10				
Trichlorobiphenyl	680	µg/L	2.6			<10				
Tetrachlorobiphenyl	680	µg/L	7.1			<20				
Pentachlorobiphenyl	680	µg/L	37			5.4 J				
Hexachlorobiphenyl	680	µg/L	38			<20				
Heptachlorobiphenyl	680	µg/L	11			<30				
Octachlorobiphenyl	680	µg/L	5.0			<30				
Nonachlorobiphenyl	680	µg/L	0.80 J			<50				
Decachlorobiphenyl	680	µg/L	<2.5			<50				
Aroclor-1016	8082	µg/L								
Aroclor-1221	8082	µg/L								
Aroclor-1232	8082	µg/L								
Aroclor-1242	8082	µg/L								
Aroclor-1248	8082	µg/L								
Aroclor-1254	8082	µg/L								
Aroclor-1260	8082	µg/L								
Cl-PESTICIDES/PCB										
Aldrin	8081	µg/L	0.19 JP		<6.7	0.23 JP				
alpha-BHC	8081	µg/L	2.5		1.8 DJ	0.54 JP				
gamma-BHC (Lindane)	8081	µg/L	X		<2.5	<0.38				
delta-BHC	8081	µg/L	1.9 P		<1.6	<0.24				
Dieldrin	8081	µg/L	1.5 JP		<13	<2				
Heptachlor	8081	µg/L	2.5 P		0.73 DJP	<1				
Heptachlor epoxide	8081	µg/L	1.3 JP		<6.7	<1				

TABLE 3-2. SUMMARY OF SITE G AND I LEACHATE SAMPLING RESULTS FOR APRIL 25 TO 26, 2000 (a,b)

PARAMETER	METHOD	UNITS	SAMPLE ID							
			LEACH-I-1 25-Apr-2000			LEACH-G-1 26-Apr-2000		TRIP BLANK 25-Apr-00	LEACH I-1 25-Apr-00	LEACH G-1 26-Apr-00
			02705-1	02705-1-RE	02705-1-DL	02705-2	02705-2-RE	02705-4	T002630	T002394
CHLORINATED HERBICIDES										
2,4-D	8151	µg/L	1,300 E			1,300 D	<50			
2,4-DB	8151	µg/L	<50			<100	<50			
2,4,5-T	8151	µg/L	<50			<100	380 P			
2,4,5-TP	8151	µg/L	<50			<100	<50			
Dalapon	8151	µg/L	<12000			<24000	<12000			
Dicamba	8151	µg/L	<120			<240	<120			
Dichloroprop	8151	µg/L	<600			<1200	<600			
Dinoseb	8151	µg/L	<600			<1200	<600			
MCPP (2- (4-chloro-2-methyl-phenoxyl-propanoic acid)	8151	µg/L	33000 P			34000 DP	<12000			
MCPA ((4-Chloro-2-methyl-phenoxyl)-acetic acid)	8151	µg/L	<12000			<24000	<12000			
Pentachlorophenol	8151	µg/L	840 E			830 D	380			
VOLATILES										
Chloromethane	8260	µg/L	<250			<1200	26 J			
Bromomethane	8260	µg/L	<240			<1200	<98			
Vinyl chloride	8260	µg/L	100 J			110 DJ	160			
Chloroethane	8260	µg/L	<250			<1200	<100			
Methylene chloride	8260	µg/L	14 J			<590	13 J			
Acetone	8260	µg/L	10000 E			12000 D	730			
Carbon Disulfide	8260	µg/L	<120			<620	<50			
1,1-Dichloroethene	8260	µg/L	480			580 DJ	4.8 J			
1,1-Dichloroethane	8260	µg/L	3700			4300 D	<50			
Cis/Trans-1, 2-Dichloroethene	8260	µg/L	12000 E			15000 D	1900			
1,2-Dichloroethane	8260	µg/L	<120			<620	<50			
2-Butanone	8260	µg/L	<620			<3100	<250			
Chloroform	8260	µg/L	26 J			<620	32 J			
1,1,1-Trichloroethane	8260	µg/L	10000 E			13000 D	<50			
Carbon Tetrachloride	8260	µg/L	<120			<620	<50			
Bromodichloromethane	8260	µg/L	<120			<620	<50			
1,1,2,2-Tetrachloroethane	8260	µg/L	<120			<620	<50			
1,2-Dichloropropane	8260	µg/L	<120			<620	<50			
Trans-1,3-Dichloropropene	8260	µg/L	<120			<620	<50			
Trichloroethene	8260	µg/L	620			710 D	340			
1,1,2-Trichloroethane	8260	µg/L	38 J			<620	<50			
Benzene	8260	µg/L	690			800 D	880			
Cis-1,3-Dichloropropene	8260	µg/L	<25			<120	<10			
Bromoform	8260	µg/L	<120			<620	<50			
2-Hexanone	8260	µg/L	<620			<3100	<250			

TABLE 3-2. SUMMARY OF SITE G AND I LEACHATE SAMPLING RESULTS FOR APRIL 25 TO 26, 2000 (a,b)

PARAMETER	METHOD	UNITS	SAMPLE ID							
			LEACH-I-1 25-Apr-2000			LEACH-G-1 26-Apr-2000		TRIP BLANK 25-Apr-00	LEACH I-1 25-Apr-00	LEACH G-1 26-Apr-00
			02705-1	02705-1-RE	02705-1-DL	02705-2	02705-2-RE			
4-Methyl-2-pentanone	8260	µg/L	1600			1900 DJ	930			
Tetrachloroethene	8260	µg/L	25 J			37 DJ	99			
Toluene	8260	µg/L	430			500 DJ	300			
Chlorobenzene	8260	µg/L	950			1100 D	2800 E			
Ethylbenzene	8260	µg/L	88 J			96 DJ	120			
Xylenes, Total	8260	µg/L	130			140 DJ	180			
Styrene	8260	µg/L	<120			<620	<50			
CONVENTIONALS										
Cyanide, Total	160.2	mg/L	0.013			<0.01				
Suspended Solids	160.2	mg/L	3000				180			
Biochemical Oxygen Demand	405.1/5210B	mg/L	300				1900			
Total Dissolved Solids	160.1	mg/L	4000				2800			
Volatile Solids	160.4	mg/L	100				100			
Total Organic Carbon	415.1	mg/L	420				1400			
Chemical Oxygen Demand	410.1	mg/L	1200				3000			
Total Kjeldahl Nitrogen-N	351.2	mg/L	42				39			
Nitrate-N	353.2	mg/L	<0.05				<0.05			
Ammonia (as N)	350.1	mg/L	17				16			
Sulfate as SO ₄	300.0	mg/L	290				340			
Nitrite-N	353.2	mg/L	0.011 B				0.043 B			
Chloride	325.2	mg/L	690				380			
pH	150.1	s.u.	6.3				6.4			
Specific Conductance	120.1	µmhos/cm	4700				4400			
Ortho-Phosphate-P	365.1	mg/L	0.22				0.44			
Color, True	110.2	PCU	1000				2000			
Total Dissolved Inorganic Solids	2540C/E	mg/L	2300				2000			
Alkalinity (as CaCO ₃)	310.1	mg/L								
DIOXINS										
2378-TCDD	MIT2	ppq						(0.9)	8.7 J	
12378-PeCDD	MIT2	ppq						(1.2)	14.1 J	
123478-HxCDD	MIT2	ppq							8.9 J	13.4 J
123678-HxCDD	MIT2	ppq							141	24.0 J
123789-HxCDD	MIT2	ppq							56.5	33.7 J
12346789-HpCDD	MIT2	ppq							18440	495
12346789-OCDD	MIT2	ppq							198030 E	4490
2378-TCDF	MIT2	ppq							3.3 J	181
12378-PeCDF	MIT2	ppq							(114) X	13.6 J
23478-PeCDF	MIT2	ppq							2.9 J	16.8 J
123478-HxCDF	MIT2	ppq							59.3	175
123678-HxCDF	MIT2	ppq							12.4 JB	10.7 J

TABLE 3-2. SUMMARY OF SITE G AND I LEACHATE SAMPLING RESULTS FOR APRIL 25 TO 26, 2000 (a,b)

PARAMETER	METHOD	UNITS	SAMPLE ID							
			LEACH-I-1 25-Apr-2000			LEACH-G-1 26-Apr-2000		TRIP BLANK 25-Apr-00	LEACH I-1 25-Apr-00	LEACH G-1 26-Apr-00
			02705-1	02705-1-RE	02705-1-DL	02705-2	02705-2-RE	02705-4	T002630	T002394
234678-HxCDF	MIT2	ppq							18.6 J	8.5 J
123789-HxCDF	MIT2	ppq							(1.3)	(4.0) J
1234678-HpCDF	MIT2	ppq							4070	218
1234789-HpCDF	MIT2	ppq							222	29.1 J
12346789-OCDF	MIT2	ppq							29830	1470
TOTAL TCDD	MIT2	ppq							(0.9)	70.2
TOTAL PeCDD	MIT2	ppq							6.0	70.8
TOTAL HxCDD	MIT2	ppq							1690	270
TOTAL HpCDD	MIT2	ppq							40400 E	1050
TOTAL TCDF	MIT2	ppq							3.3 X	641
TOTAL PeCDF	MIT2	ppq							8.4 X	306
TOTAL HxCDF	MIT2	ppq							1900 X	473
TOTAL HpCDF	MIT2	ppq							21700	973

Notes:

(a) Dioxins analyzed by Triangle Laboratories, Durham, North Carolina. All other analyses by Savannah Laboratories, Savannah, Georgia.

(b) Definition of Organic Data Qualifiers.

J This flag indicates an estimated value. This flag used (1) when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the CRQL but greater than zero, and (3) when the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL but greater than zero.

P This flag is used for pesticide/Aroclor target analyte when there is greater than 40% RPD for detected concentrations between the two GC columns.

B This flag is used when the analyte is found in the associated method blank as well as in the sample.

E This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

D If a sample or extract is reanalyzed at a higher dilution factor, the DL suffix is appended to the sample number of the Form I for the more diluted sample, and all reported concentrations on that Form I are flagged with the D flag.

X Unable to determine analyte presence at this concentration due to matrix interference.

S This flag indicates that the reported value was determined by the Method of Standard Additions (MSA).

(C) RE = Rerun

DL = Dilution

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4.0 TESTING PROGRAM RESULTS

The screening tests were conducted from July 26 to August 31, 2000. The testing protocols and results of each set of tests are presented in the following sections.

4.1 ACTIVATED CARBON ADSORPTION TESTS

The target parameters for activated carbon were:

- volatile organic compounds (VOCs);
- semi-volatile organic compounds (SVOCs);
- PCBs;
- herbicides;
- dioxin;
- metal;
- mercury; and
- pesticides

Batch isotherm tests were conducted to provide an initial indication of carbon usage rates and determine the preferred pH for adsorption. The batch isotherm tests were followed by a pour-through column test. This test demonstrated the performance of activated carbon adsorption while treating a limited sample volume. Analytical data reports for activated carbon tests are provided in Attachment 3.

4.1.1 Batch Carbon Isotherm Tests

An initial pH screening batch isotherm test was conducted by adding an activated carbon dose to 500 mL samples in plastic bottles. The purpose of this screening test was to determine the preferred pH for adsorption. The carbon dose was 4 mg of carbon per mg of TOC assuming a TOC value of 1,000 mg/L (based upon an approximation to the Site I and G data in Table 3-2). The pH of the sample in each bottle was adjusted to 5, 6.5 (unadjusted), 9, or 11 s.u. Approximately 10.8 mL of HCl was required to adjust the sample to pH 5. Approximately 15.2, and 29.4 mL of NaOH was required for the pH 9 and pH 11 adjustments. The bottles were shaken for approximately 19 hours. The pH adjustments were made using analytical grade NaOH (1N) or HCl (1N). One sample was not shaken to evaluate any TOC loss due to the shaking action required by the test

protocol. Calgon powdered WPX service activated carbon was used for the batch isotherm tests.

The results of the pH screening isotherm tests are provided in Table 4-1. A 65 percent TOC removal was found at pH 5. The next highest removal rate was 47 percent at a pH of 7. Based upon these TOC results, a pH of 5 s.u. appeared to provide the better adsorption condition. A pH of 5.0 s.u. was selected for the full batch isotherm test. The activated carbon doses used were approximately 1:1, 2:1, 4:1, 8:1, 16:1, 32:1, and 64:1 mg of carbon per mg of TOC (again assuming a TOC of 1,000 mg/L). The tests were conducted by first removing any settled solids, then adding the required weights of activated carbon to 500 mL samples in plastic bottles. The sample bottles were packed on a shaker table and allowed to agitate for approximately 19 hours to ensure chemical equilibrium. The samples were then double filtered through 0.45 micron filter paper for activated carbon removal prior to analysis for TOC and COD. A full batch isotherm test at the unadjusted sample pH of 6.5 s.u. was also conducted since there are distinct operational advantages in not having a pH adjustment step in the full-scale system. These advantages include installing a less elaborate treatment system and reducing chemical handling operations. The full batch isotherm test results are provided in Table 4-2.

The batch isotherm results for TOC and COD are presented in Figures 4-1 and 4-2. The activated carbon usage rate for the Sauget Area 1 leachate sample was projected to be 0.09 mg TOC removed per mg of activated carbon at an influent TOC concentration of 490 mg/L at pH 5 s.u. The usage rate at the unadjusted pH of 6.5 was projected to be 0.07 mg TOC removed per mg activated carbon at the same influent concentration.

On a COD basis, the usage rate was projected to be 0.36 mg COD removed per mg activated carbon at an influent COD concentration of 1,490 mg/L at pH 5 s.u. The usage rate was projected to be 0.26 mg COD removed per mg activated carbon at the same influent concentration at the unadjusted pH.

4.1.2 Pour-Through Carbon Column Test

Following the batch isotherm tests, a short-term continuous-flow column test was performed. Approximately 4 feet of granular WPX Calgon activated carbon was placed

in a one-inch diameter column. The activated carbon bed was wetted with distilled water prior to passing Sauget Area 1 leachate through the column at a hydraulic loading rate of approximately 3 gpm/ft². The leachate sample was not filtered prior to passing through the carbon column. The column effluent conductivity was monitored to determine when the distilled water in the activated carbon bed had been purged from the column. After 10 bed volumes of leachate had passed through the column, the effluent was sampled and analyzed.

The results of the pour-through column test are provided in Table 4-3. The effluent TOC concentration of 21 mg/L represents a 96 percent reduction from an initial concentration of 520 mg/L (see Table 3-1). The column effluent sample was also analyzed for a number of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs).

All but three of the semivolatile organics were reduced to less than the MDL. The highest concentration among the compounds detected was 1,2,4-Trichlorobenzene at 1.7 µg/L. Most VOCs were reduced to less than the MDL. Seven VOCs were detected at less than 17 µg/L. Acetone was detected at 2,900 µg/L. Acetone is not expected to be completely removed by activated carbon because of its low molecular weight and high water solubility.

All PCBs, chlorinated herbicides, and pesticides were reported to be less than the MDL.

The highest detected dioxin concentration was 12346789-OCDD at 2,070 ppq. Five other dioxins were detected between 146 and 336 ppq. Most of the remaining dioxins were less than a MDL of approximately 2 ppq.

4.2 CHEMICAL PRECIPITATION JAR TESTS

The target parameters for chemical precipitation were metals, including mercury. The precipitation screening testing consisted of batch jar tests to determine the pH, precipitation reagent, and dose suitable to remove the metals in the leachate. Lime (Ca(OH)_2) and caustic (NaOH) were the precipitation reagents evaluated at pH levels of 7, 8, 9, 10, and 11 s.u. Analytical grade caustic and lime were used in these tests.

The jar tests were carried out in 1,000 mL beakers using a standard jar test apparatus. Approximately 1,000 mL of groundwater sample was placed into the beaker. While rapid mixing at approximately 80 revolutions per minute (rpm), the precipitation chemicals were added. Rapid mixing of the sample was continued for 2 minutes. The samples were then flocculated at approximately 20 rpm for 5 minutes then allowed to settle for 15 minutes prior to filtering the supernatant for metals analyses. Since the lime and caustic precipitates formed large, well-formed flocs, polyelectrolytes were not added during the flocculation stage.

The jar test results using lime and caustic are presented in Tables 4-4 and 4-5. The results do not include metals not normally targeted for removal by precipitation, i.e., calcium, potassium, magnesium, or sodium. Antimony, beryllium, strontium, and thallium are also not included since they were not detected in the combined leachate sample (see Table 3-1). The results indicate that metals were significantly reduced by precipitation in the range of 9 to 10 s.u. Lime and caustic had similar metal removals. Arsenic, barium, copper, and molybdenum showed some removal, but the final concentrations were not below detection limits. Chromium removal was shown to be most effective at higher pH values.

Solids generation data are reported in Table 4-6 and Figure 4-3. A significant increase in the generation of solids was observed at pH 9 through 11 s.u. for lime. The 39,000 mg/L result at pH 9 s.u. appears to be high, relative to the results for pH 10 and 11 s.u. Caustic precipitation generated much less solids than lime. The pH 10 s.u. result of 520 mg/L appears low, relative to pH 9 and 11 s.u. results of 7,500 and 13,000 mg/L, respectively.

4.3 ACTIVATED SLUDGE BATCH TESTS

The target parameters for activated sludge treatment were:

- volatile organic compounds VOCs);
- semi-volatile organic compounds (SVOCs);
- pesticides; and,
- herbicides.

Three batch test units were operated. Each test unit was seeded with microorganisms from a Publicly Owned Treatment Works (POTW) in Murfreesboro, Tennessee. The POTW sludge contained a nitrifying microorganism population capable of ammonia removal.

The volume of sludge was varied to provide a range of initial loadings to the biomass. The volume of leachate was kept constant (7 percent of the total) so that the initial organic concentrations were the same in each unit. Dionized (DI) water and salt (NaCl) were used to equalize the volume and conductivity in each test unit. The initial characteristics of each test unit were:

Unit	MLSS ^(a) (mg/L)	pH (s.u.)	COD (mg/L)	Conductivity (μ hos/cm)	NH ₃ -N (mg/L)
1	1,120	7.5	509	2,380	5.8
2	2,700	7.6	502	2,320	5.8
3	7,820	7.4	495	1,680	5.0

Notes:

(a) At 24 hours.

To start the test, the POTW sludge was added to the influent and DI water volumes. The test reactors were 5-gallon plastic containers aerated with laboratory air and an aquarium diffuser stone. Additional mixing was provided by a submersible aquarium mixer. The following analyses were run on each test unit.

- pH;
- conductivity;
- temperature;
- dissolved oxygen (D.O.);
- oxygen uptake rate (OUR);
- COD;
- NH₃-N;
- NO₃-N; and,
- NO₂-N.

The test units were sampled at 0, 1, 2, 4, 8, 14, 24, 30, 48, 54, 72, and 76 hours. The 0 and 76 hour samples were also analyzed for PO₄-P. The 24-hour sample was analyzed for MLSS and MLVSS.

All samples collected were analyzed by Savannah Laboratory for TOC and COD. In addition, the 76-hour sample was analyzed for pesticides, herbicides, VOCs, SVOCs, BOD, and TKN.

The batch test results are presented in Tables 4-7 (Summary data) and 4-8 (Savannah conventional and specific organics data) and Attachment 5 (lab report and ADVENT treatability data). The batch test initial concentrations were calculated from the fraction of leachate used in the test makeup (where "<MDL" results are reported the MDL was used). The VOC and SVOC results are summarized as follows.

Parameter	Units	Combined Leachate July 19, 2000	Calculated Initial ^(a)	Activated Sludge Treatment (76 hrs)
Phenol	µg/L	4,500	321	<10
2-chlorophenol	µg/L	450	32	70
1,4-Dichlorobenzene	µg/L	570	41	11
1,2-Dichlorobenzene	µg/L	350	25	10
2,4-Dichlorophenol	µg/L	1,500	107	380 E
1,2,4-Trichlorobenzene	µg/L	2,900	207	10
Naphthalene	µg/L	<250	18	860 E
4-Chloroaniline	µg/L	7,700	550	2,400
Pentachlorophenol	µg/L	5,200	371	490
Acetone	µg/L	44,000 E	3,143	280
1,1-Dichloroethane	µg/L	1,500 E	107	<5
Cis/Trans-1,2-Dichloroethene	µg/L	4,000E	286	<5
1,1,1-Trichloroethane	µg/L	3,700 E	264	<5
Trichloroethene	µg/L	380	27	<2.7
Benzene	µg/L	530 E	38	<1.2
4-methyl-2-pentaone	µg/L	840	60	<25
Chlorobenzene	µg/L	1,200 E	86	<2.4

Note:

E = Exceeded upper level

(a) Assuming one liter of leachate in 14L initial test volume.

Some negative removals are the result of calculated initial concentrations being less than the 76-hour results. Some semivolatiles showed moderate to good removal. Phenol and 1,2,4-Trichlorobenzene showed good removal in the batch units. Hexachlorobenzene had slight to moderate removal. Bio-treatment did not seem effective at removing compounds such as 2-Chlorophenol and 2,4-Dichlorophenol.

The removal of COD and NH₃-N are presented in Figures 4-4 and 4-5 respectively. No significant COD removal occurred in the first 12 hours of operation, probably because the microorganisms were not acclimated to the constituents in this groundwater. Similarly, NH₃-N removal did not begin until after 24 hours of operation. Once COD removal began,

all three units removed COD at approximately the same rate. Units 1 and 2 removed NH₃-N at similar rates. The Unit 3 results were unusual in that the NH₃-N concentration increased. This type of effect can be due to the breakdown of TKN. The COD and NH₃-N removal rates for each unit were as follows:

Unit	Initial COD Loading Rate (g/g MLVSS-d)	COD Removal Rate (g/g MLVSS-d)	NH ₃ -N Removal Rate (g/g MLVSS-d)
1	0.73	0.29	0.007
2	0.28	0.09	0.003
3	0.09	0.02	Not calculated

Nitrate was also measured in each unit during testing. There was an increase in nitrate concentrations which demonstrates that nitrification did occur along with degradation of nitrated organics.

4.4 BATCH OXIDATION TESTS

The target parameters for oxidation were:

- volatile organic compounds (VOCs);
- semivolatile organic compounds (SVOCs);
- cyanide (CN);
- pesticides;
- herbicides; and,
- dioxin.

Hydrogen peroxide and ozone were the two oxidants tested with the Sauget Area 1 leachate. Analytical reports for these tests are provided in Attachment 6.

4.4.1 Hydrogen Peroxide with Iron Catalyst

The hydrogen peroxide (H₂O₂) tests were conducted in 3-gallon plastic containers. Approximately 8L of leachate were added to each container. The samples were mixed using a mechanical mixer.

Oxidation tests were conducted at pH values of 4 s.u. and 7 s.u. Hydrogen peroxide was added to each sample at a total dose of 5 parts H₂O₂ per 1 part initial COD. The H₂O₂ dose was added in equal increments every 30 minutes over a four-hour testing

period. An iron catalyst ($\text{FeSO}_4 \cdot 7 \text{ H}_2\text{O}$) was added at the start of the test at a ratio of 1 part Fe per 10 parts of the total H_2O_2 .

After the initial H_2O_2 dose, the pH 4 s.u. test sample appeared to be turbid with a dark brown color. The pH 7 s.u. test sample was a lighter brown turbid sample. For the first three peroxide doses, the pH in each test sample dropped after the hydrogen peroxide was added. The test units' pH values were readjusted to 4 and 7 s.u. as needed.

The hydrogen peroxide results are presented in Tables 4-8 (ADVENT treatability data) and 4-9 (conventionals and specific organics by Savannah). COD removals are presented in Figure 4-6. COD removal was much more rapid at pH 4 s.u. versus 7 s.u. The COD removal was greater than 89 percent after 1 hour at pH 4 s.u. At pH 7 s.u., it took 4 hours to achieve an 89 percent COD removal.

All semivolatile organics except phenol, 2-Chlorophenol, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, nitrobenzene, 2,4-Dichlorophenol, 1,2,4-trichlorobenzene, 2,4,6-Trichlorophenol, 2,4,5-Trichlorophenol, hexachlorobenzene, and pentachlorophenol were reported at or less than the MDL. The organics that were detected were higher in the pH 7 s.u. test versus the pH 4 s.u. tests. For example:

Parameter	Units	Combined Leachate	pH 4 Test	pH 7 Test
2-Chlorophenol	$\mu\text{g/L}$	450	10	180
1,2,4-Trichlorobenzene	$\mu\text{g/L}$	2,900	35	210
Pentachlorophenol	$\mu\text{g/L}$	5,200	38	1,700 E

Notes:

E = Exceeded upper level.

The TSS concentration increased to 2,700 mg/L in the pH 4 test sample after 4 hours of treatment. The TSS concentration in the pH 7 test sample increased to 9,000 mg/L.

Pesticides were at or less than the MDL at pH 4 s.u. At pH 7 s.u., alpha-BHC was the only pesticide above the detection limit. Herbicides were at or less than the MDL at pH 4 s.u. At pH 7 s.u., 2,4-D, 2,4,5-T, MCPA, and pentachlorophenol were above detection limits.

Volatiles except acetone, 1,1-Dichloroethane, 2-Butanone, 1,1,1-Trichloroethane, benzene, toluene, chlorobenzene, and ethylbenzene were reported at or less than the MDL. The detected volatiles were higher in the pH 7 s.u. test versus the pH 4 s.u. test.

4.4.2 Ozone

Eight liters of leachate were used in two ozone tests. One test was conducted at pH 9 s.u. and the other at pH 7 s.u. Ozone was generated using a portable ozone generator. Bottled oxygen supplied the ozone generator. A 12-L glass reactor was used as an ozone contactor. Ozone was bubbled at the bottom of the reactor through a fine bubble diffuser.

Test results are presented in Tables 4-10 and 4-11 and Figure 4-7. Ozone was not as effective as hydrogen peroxide with respect to COD removal (30 percent versus up to 89 percent). Semivolatile organics except phenol, 2-chlorophenol, 2-methylphenol, nitrobenzene, 2,4-Dichlorophenol, 1,2,4-Trichlorobenzene, 4-chloroaniline, 2,4,6-Trichlorophenol, 2,4,5-Trichlorophenol, Diethylphthalate, hexachlorobenzene, and pentachlorophenol were reported at or less than the MDL. The detected organics were higher in the pH 9 s.u. test versus the pH 7 s.u. test.

The TSS concentration in the pH 7 s.u. test sample increased to 1,200 mg/L after 73 hours of treatment. The TSS concentration in the pH 9 s.u. test sample increased to 12,000 mg/L after 48 hours of treatment.

Alpha-BHC was the only pesticide reported above the MDL. Herbicides except 2,4-D, MCPA, pentachlorophenol, and 2,4,5-T were reported at or less than the MDL.

Volatile organics except acetone, 2-Butanone, and chlorobenzene were reported at or less than the MDL.

4.5 BATCH FILTRATION TESTS

The target parameter for filtration was polychlorinated biphenyls (PCBs). Filtration tests were run using a glass filter flask connected to a vacuum source. A ceramic filter dish

was used to hold the filter paper. Filter papers of the following pore sizes were tested: 0.45 μm , 1.5 μm , and 10 μm .

The results of the filtration tests are provided in Table 4-12 and Attachment 7. All PCBs were reduced to less than the MDLs at all three filter sizes.

4.6 TITRATION CURVES

Titration curves developed for the Sauget Area 1 Leachate are presented in Figure 4-8. The figure shows two similar titration curves. The first curve is labeled as "Acid 1" and "Base 1", while the second curve is labeled "Acid 2" and "Base 2". The data for the first curve was generated on July 25, 2000. The data for the second curve was generated on August 4, 2000.

TABLE 4-1. pH SCREENING BATCH CARBON ISOTHERM TEST RESULTS

SAMPLE DESCRIPTION	SAVANNAH SAMPLE ID	CARBON DOSE (mg/L)	INITIAL pH	FINAL pH	TOC (mg/L)	TOC REMOVED (%)	COD(a) (mg/L)	COD REMOVED (%)
Control - not shaken	05067-1	4,000	6.5	7.8	520		1,588	
Control - shaken	05067-2	4,000	6.5	7.0	490	6	1,482	7
pH 5 - shaken	05067-3	4,000	5.0	6.3	170	65	494	67
pH 7 - shaken	05067-4	4,000	7.0	8.1	260	47	720	51
pH 9 - shaken	05067-5	4,000	9.0	8.3	280	43	758	49
pH 11 - shaken	05067-6	4,000	11.0	10.4	310	37	829	44

Notes:

(a) Analysis by ADVENT

TABLE 4-2. BATCH CARBON ISOTHERM TEST RESULTS

SAMPLE DESCRIPTION	SAVANNAH BATCH # SAMPLE ID	INITIAL pH(a) (s.u.)	TARGET CARBON DOSE (mg/L)	TOC (mg/L)	X/M (mg TOC rem./ mg carbon)	COD(a) (mg/L)	X/M (mg COD rem./ mg carbon)
Control - not shaken	05204-1	6.53	0	490		1,542	
Control - shaken	05204-9	6.53	0	490		1,490	
pH 5 @ 1,000 mg/L carbon	05204-10	4.96	1,000	420	0.0700	1,228	0.2620
pH 5 @ 2,000 mg/L carbon	05204-11	5.02	2,000	340	0.0750	966	0.2620
pH 5 @ 4,000 mg/L carbon	05204-12	5.03	4,000	190	0.0750	543	0.2368
pH 5 @ 8,000 mg/L carbon	05204-13	5.01	8,000	180	0.0388	500	0.1238
pH 5 @ 16,000 mg/L carbon	05204-14	4.94	16,000	92	0.0249	282	0.0755
pH 5 @ 32,000 mg/L carbon	05204-15	5.03	32,000	22	0.0146	105	0.0433
pH 5 @ 128,000 mg/L carbon	05204-16	5.02	128,000	13	0.0037	66	0.0111
unadjusted @ 1,000 mg/L carbon	05204-2	6.49	1,000	430	0.0600	1,216	0.2740
unadjusted @ 2,000 mg/L carbon	05204-3	6.51	2,000	390	0.0500	1,090	0.2000
unadjusted @ 4,000 mg/L carbon	05204-4	6.50	4,000	280	0.0525	767	0.1808
unadjusted @ 8,000 mg/L carbon	05204-5	6.52	8,000	220	0.0338	603	0.1109
unadjusted @ 16,000 mg/L carbon	05204-6	6.49	16,000	160	0.0206	477	0.0633
unadjusted @ 32,000 mg/L carbon	05204-7	6.49	32,000	66	0.0133	187	0.0407
unadjusted @ 128,000 mg/L carbon	05204-8	6.52	128,000	15	0.0037	53	0.0112

Notes:

(a) Analysis by ADVENT.

TABLE 4-3. POUR-THROUGH CARBON COLUMN TEST TREATED SAMPLE RESULTS

PARAMETER	METHOD	UNITS	POUR-THROUGH TREATED SAMPLE 05346-1
TCL SEMIVOLATILES			
1,2-Dichlorobenzene	8270	µg/L	<10
Phenanthrene	8270	µg/L	<10
Anthracene	8270	µg/L	<10
Di-n-butylphthalate	8270	µg/L	<10
Fluoranthene	8270	µg/L	<10
Pyrene	8270	µg/L	<10
Butylbenzylphthalate	8270	µg/L	<10
3,3'-Dichlorobenzidine	8270	µg/L	<20
Benzo (a) anthracene	8270	µg/L	<10
bis (2-Ethylhexyl) phthalate	8270	µg/L	0.52
Chrysene	8270	µg/L	<10
Di-n-octylphthalate	8270	µg/L	<10
Benzo (b) fluoranthene	8270	µg/L	<10
Benzo (k) fluoranthene	8270	µg/L	<10
Benzo (a) pyrene	8270	µg/L	<10
Indeno (1,2,3-cd) pyrene	8270	µg/L	<10
Dibenzo (a,h) anthracene	8270	µg/L	<10
Benzo (g,h, l) perylene	8270	µg/L	<10
Carbazole	8270	µg/L	<3.4
POLYCHLORINATED BIPHENYLS			
Monochlorobiphenyl	680	µg/L	<0.1
Dichlorobiphenyl	680	µg/L	<0.1
Trichlorobiphenyl	680	µg/L	<0.1
Tetrachlorobiphenyl	680	µg/L	<0.2
Pentachlorobiphenyl	680	µg/L	<0.2
Hexachlorobiphenyl	680	µg/L	<0.2
Heptachlorobiphenyl	680	µg/L	<0.3
Octachlorobiphenyl	680	µg/L	<0.3
Nonachlorobiphenyl	680	µg/L	<0.5
Decachlorobiphenyl	680	µg/L	<0.5
CI-PESTICIDES/PCB			
Aldrin	8081	µg/L	<0.05
alpha-BHC	8081	µg/L	<0.014
gamma-BHC (Lindane)	8081	µg/L	<0.019
delta-BHC	8081	µg/L	<0.012
Dieldrin	8081	µg/L	<0.10
Heptachlor	8081	µg/L	<0.05
Heptachlor epoxide	8081	µg/L	<0.05
CHLORINATED HERIBICIDES			
2,4-D	8151	µg/L	<0.5
2,4-DB	8151	µg/L	<0.5
2,4,5-T	8151	µg/L	<0.5
2,4,5-TP	8151	µg/L	<0.5
Dalapon	8151	µg/L	<120
Dicamba	8151	µg/L	<1.2
Dichloroprop	8151	µg/L	<6
Dinoseb	8151	µg/L	<6
MCPP (2- (4-chloro-2-methyl-	8151	µg/L	<120

TABLE 4-3. POUR-THROUGH CARBON COLUMN TEST TREATED SAMPLE RESULTS

PARAMETER	METHOD	UNITS	POUR-THROUGH TREATED SAMPLE 05346-1
phenoxyl-propanoic acid)	8151	µg/L	
MCPA ((4-Chloro-2-methyl-phenoxy)-acetic acid)	8151	µg/L	<120
Pentachlorophenol	8151	µg/L	<1
VOLATILES			
Chloromethane	8260	µg/L	<100
Bromomethane	8260	µg/L	<98
Vinyl chloride	8260	µg/L	<100
Chloroethane	8260	µg/L	<100
Methylene chloride	8260	µg/L	17
Acetone	8260	µg/L	2900
Carbon Disulfide	8260	µg/L	1.4
1,1-Dichloroethene	8260	µg/L	<50
1,1-Dichloroethane	8260	µg/L	<50
Cis/Trans-1, 2-Dichloroethene	8260	µg/L	<50
Chloroform	8260	µg/L	<50
1,2-Dichloroethane	8260	µg/L	<50
2-Butanone	8260	µg/L	14
1,1,1-Trichloroethane	8260	µg/L	<50
Carbon Tetrachloride	8260	µg/L	<50
Bromodichloromehtane	8260	µg/L	<50
1,1,2,2-Tetrachloroethane	8260	µg/L	<50
1,2-Dichloropropane	8260	µg/L	<50
Trans-1,3-Dichloropropene	8260	µg/L	<50
Trichloroethene	8260	µg/L	<27
Dibromochloromethane	8260	µg/L	<50
1,1,2-Trichloroethane	8260	µg/L	<50
Benzene	8260	µg/L	1.3
Cis-1,3-Dichloropropene	8260	µg/L	<10
Bromoform	8260	µg/L	<50
2-Hexanone	8260	µg/L	<250
4-Methyl-2-pentanone	8260	µg/L	<250
Tetrachloroethene	8260	µg/L	<50
Toluene	8260	µg/L	14
Chlorobenzene	8260	µg/L	<50
Ethylbenzene	8260	µg/L	1.6
Xylenes, Total	8260	µg/L	5.9
Styrene	8260	µg/L	<50
CONVENTIONALS			
Total Organic Carbon	415.1	mg/L	21
Chemical Oxygen Demand	410.1	mg/L	100
DIOXINS			
2378-TCDD	MIT2	ppq	<2.8
12378-PeCDD	MIT2	ppq	<2.5
123478-HxCDD	MIT2	ppq	<2.6
123678-HxCDD	MIT2	ppq	<2.6
123789-HxCDD	MIT2	ppq	<2.6
1234678-HpCDD	MIT2	ppq	146
12346789-OCDD	MIT2	ppq	2070

TABLE 4-3. POUR-THROUGH CARBON COLUMN TEST TREATED SAMPLE RESULTS

PARAMETER	METHOD	UNITS	POUR-THROUGH TREATED SAMPLE 05346-1
2378-TCDF	MIT2	ppq	<2.1
12378-PeCDF	MIT2	ppq	8.3
23478-PeCDF	MIT2	ppq	<1.8
123478-HxCDF	MIT2	ppq	11.4
123678-HxCDF	MIT2	ppq	<1.8
234678-HxCDF	MIT2	ppq	<2.0
123789-HxCDF	MIT2	ppq	<2.4
1234678-HpCDF	MIT2	ppq	50.7
1234789-HpCDF	MIT2	ppq	10.8
12346789-OCDF	MIT2	ppq	336
TOTAL TCDD	MIT2	ppq	<2.8
TOTAL PeCDD	MIT2	ppq	152
TOTAL HxCDD	MIT2	ppq	31.8
TOTAL HpCDD	MIT2	ppq	286
TOTAL TCDF	MIT2	ppq	<2.1
TOTAL PeCDF	MIT2	ppq	8.3
TOTAL HxCDF	MIT2	ppq	36
TOTAL HpCDF	MIT2	ppq	234
DIOXINS			
2378-TCDD	8290	ppq	<2.8
12378-PeCDD	8290	ppq	<2.5
123478-HxCDD	8290	ppq	<2.6
123678-HxCDD	8290	ppq	<2.6
123789-HxCDD	8290	ppq	<2.6
1234678-HpCDD	8290	ppq	146
12346789-OCDD	8290	ppq	2070
2378-TCDF	8290	ppq	<2.1
12378-PeCDF	8290	ppq	8.3
23478-PeCDF	8290	ppq	<1.8
123478-HxCDF	8290	ppq	11.4
123678-HxCDF	8290	ppq	<1.8
234678-HxCDF	8290	ppq	<2.0
123789-HxCDF	8290	ppq	<2.4
1234678-HpCDF	8290	ppq	50.7
1234789-HpCDF	8290	ppq	10.8
12346789-OCDF	8290	ppq	336
TOTAL TCDD	8290	ppq	<2.8
TOTAL PeCDD	8290	ppq	152
TOTAL HxCDD	8290	ppq	31.8
TOTAL HpCDD	8290	ppq	286
TOTAL TCDF	8290	ppq	<2.1
TOTAL PeCDF	8290	ppq	8.3
TOTAL HxCDF	8290	ppq	36.0
TOTAL HpCDF	8290	ppq	234

TABLE 4-4. CHEMICAL PRECIPITATION JAR TEST RESULTS USING LIME

PARAMETER	METHOD	UNITS	COMBINED LEACHATE INITIAL CONC. pH 6.5 ^(a)	CHEMICAL PRECIP: LIME 7/28/2000						BLANK ^(d) 7/28/2000
				pH 7 ^(b) 05135-1	pH 8 ^(b) 05135-2	pH 9 ^(b) 05135-3	pH 10 ^(b) 05135-4	pH 11 ^(b) 05135-5	REAGENT CONTROL ^(c) 05135-11	
METALS										
Aluminum	6010	mg/L	0.43	0.061 B	<0.200 U	<0.200 U	<0.200 U	<0.200 U	0.290	<0.20 U
Antimony	6010	mg/L	<0.02	<0.020 U	<0.020 U	<0.020 U	<0.020 U	<0.020 U	<0.020 U	<0.02 U
Arsenic	6010	mg/L	0.011	0.006 B	0.0045 B	0.0046 B	0.0037 B	0.0058 B	<0.010 U	<0.01 U
Barium	6010	mg/L	0.38	0.17	0.092	0.03	0.039	0.045	0.0045 B	<0.01 U
Beryllium	6010	mg/L	<0.004	<0.004 U	<0.004 U	<0.004 U	<0.004 U	<0.004 U	<0.004 U	<0.004 U
Cadmium	6010	mg/L	0.0026	0.0016 B	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U
Calcium	6010	mg/L	490	680 E	600 E	230 E	350 E	400 E	930 E	<0.500 UE
Chromium	6010	mg/L	0.650	0.28	0.2	0.069	0.015	0.014	0.012	<0.010 U
Cobalt	6010	mg/L	0.300	0.26	0.12	0.009 B	0.0039 B	0.0028 B	<0.010 U	<0.010 U
Copper	6010	mg/L	0.0078	0.0052 B	0.0012 B	<0.020 U	0.0017 B	0.0014 B	0.0025 B	<0.020 U
Iron	6010	mg/L	130	53	15	0.65	0.085	0.062	0.47	<0.050 U
Potassium	6010	mg/L	34	30	34	32	32	32	0.22 B	<1.000 U
Lead	6010	mg/L	0.07	0.003 B	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U
Magnesium	6010	mg/L	75	74	74	64	6.3	0.51	2.3	<0.500 U
Manganese	6010	mg/L	3.3	3.1	0.8	0.028	0.0065 B	<0.010 U	0.021	<0.010 U
Molybdenum	6010	mg/L	0.0450	0.044	0.038	0.037	0.034	0.035	<0.010 U	<0.010 U
Mercury	6010	mg/L	0.0013	<0.0002 U	<0.0002 U	<0.0002 U	<0.0002 U	<0.0002 U	<0.0002 U	<0.0002 U
Nickel	6010	mg/L	0.12	0.07	0.055	0.032 B	0.016 B	0.014 B	<0.040 U	<0.040 U
Selenium	6010	mg/L	0.0043	<0.005 B	<0.010 U	<0.010 U	<0.010 U	<0.010 U	<0.010 U	<0.010 U
Silver	6010	mg/L	0.01	<0.010 U	<0.010 U	<0.010 U	<0.010 U	<0.010 U	<0.010 U	<0.010 U
Sodium	6010	mg/L	230	210	220	210	220	220	0.81	<0.500 U
Thallium	6010	mg/L	<0.01	<0.010 U	<0.010 U	<0.010 U	<0.010 U	<0.010 U	<0.010 U	<0.010 U
Vanadium	6010	mg/L	0.1	0.011	0.0026	<0.010 U	<0.010 U	<0.010 U	<0.010 U	<0.010 U
Zinc	6010	mg/L	0.84	0.38	0.022	<0.020 U	<0.020 U	<0.020 U	0.017 B	<0.020 U
CONVENTIONALS										
Suspended Solids	160.2	mg/L		66	160	10	11	17	110	
pH (Savannah)	150.1	s.u.		6.8	7.4	8.9	10	11	12	
pH (Advent) ^(e)		s.u.	6.5	6.99	8.05	9.04	10.09	11.05	12.14	7
Specific Conductance	120.1	μmhos/cm		3700	3500	2500	2500	2800	8.3	
Alkalinity (as CaCO ₃)	310.1	mg/L		1000	810	220	250	380	2700	

Notes:

(a) See Table 3-1.

(b) Dose to desired pH.

(c) Lime control consisted of 40 mL of lime (volume for pH 11 adjustment) added to 1-L DI water.

(d) Blank control consisted of 1-L of same DI water used for the lime and caustic controls.

(e) Analysis by ADVENT.

B This flag is used when the analyte is found in the associated method blank as well as in the sample.

E This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

U This flag indicates the analyte was below the detectable limit.

TABLE 4-5. CHEMICAL PRECIPITATION JAR TEST RESULTS USING CAUSTIC

PARAMETER	METHOD	UNITS	COMBINED LEACHATE INITIAL CONC. pH 6.5 ^(a)	CHEMICAL PRECIP: CAUSTIC 7/28/2000						BLANK ^(d) 7/28/2000 05135-23	
				pH 7 ^(b) 05135-6	pH 8 ^(b) 05135-7	pH 9 ^(b) 05135-8	pH 10 ^(b) 05135-9	pH 11 ^(b) 05135-10	REAGENT CONTROL ^(c) 05135-12		
METALS											
Aluminum	6010	mg/L	0.43	<0.200 U	<0.200 U	<0.200 U	<0.200 U	<0.200 U	<0.200 U	<0.20 U	
Antimony	6010	mg/L	<0.02	<0.020 U	<0.020 U	<0.020 U	<0.020 U	<0.020 U	<0.020 U	<0.02 U	
Arsenic	6010	mg/L	0.011	0.0058 B	0.0044 B	0.0034 B	0.0056 B	0.004 B	<0.010 B	<0.01 U	
Barium	6010	mg/L	0.38	0.17	0.15	0.062	0.0093 B	0.0061 B	<0.010	<0.01 U	
Beryllium	6010	mg/L	<0.004	0.004 U	0.004 U	0.004 U	0.004 U	<0.004 U	<0.004 U	<0.004 U	
Cadmium	6010	mg/L	0.0026	0.0012 B	0.005 U	0.005 U	0.005 U	<0.005 U	<0.005 U	<0.005 U	
Calcium	6010	mg/L	490	500 E	480 E	230 E	68 E	57 E	<0.500 E	<0.500 UE	
Chromium	6010	mg/L	0.650	0.28	0.22	0.16	0.15	0.06	<0.010	<0.010 U	
Cobalt	6010	mg/L	0.300	0.28	0.17	0.039	0.0083 B	0.005 B	<0.010	<0.010 U	
Copper	6010	mg/L	0.0078	0.0013 B	0.0015 B	0.0011 B	0.00094 B	<0.020 U	0.0016 B	<0.020 U	
Iron	6010	mg/L	130	61	30	2.7	0.29	0.19	0.034	<0.050 U	
Potassium	6010	mg/L	34	36	37	38	39	40	0.23	<1.000 U	
Lead	6010	mg/L	0.07	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	
Magnesium	6010	mg/L	75	76	73	68	48	24	<0.500	<0.500 U	
Manganese	6010	mg/L	3.3	3.3	3	0.74	0.093	0.028	<0.010	<0.010 U	
Molybdenum	6010	mg/L	0.0450	0.039	0.039	0.037	0.037	0.036	<0.010	<0.010 U	
Mercury	6010	mg/L	0.0013	<0.0002 U	<0.0002 U	<0.0002 U	<0.0002 U	<0.0002 U	<0.0002 U	<0.0002 U	
Nickel	6010	mg/L	0.12	0.068	0.048	0.032 B	0.026 B	0.021 B	<0.040	<0.040 U	
Selenium	6010	mg/L	0.0043	<0.01 U	<0.01 U	0.0058 B	<0.01 U	<0.01 U	<0.010 U	<0.010 U	
Silver	6010	mg/L	0.01	<0.01 U	<0.01 U	<0.01 U	<0.01 U	<0.01 U	<0.010 U	<0.010 U	
Sodium	6010	mg/L	230	340	480	660	930	1100	870	<0.500 U	
Thallium	6010	mg/L	<0.01	<0.01 U	<0.01 U	0.01 U	<0.01 U	<0.01 U	<0.010 U	<0.010 U	
Vanadium	6010	mg/L	0.1	0.0066 B	0.0034 B	<0.01 U	<0.01 U	<0.01 U	<0.01 B	<0.010 U	
Zinc	6010	mg/L	0.84	0.52	0.098	0.0081 B	0.02 U	<0.02 U	<0.02	<0.020 U	
CONVENTIONALS											
Suspended Solids	160.2	mg/L		14	62	17	22	33	<5		
pH (Savannah)	150.1	s.u.		6.9	7.5	7.8	9.7	10	12		
pH (Advent) ^(d)		s.u.	6.5	6.9	7.98	8.99	10.03	11.03	12.02	7	
Specific Conductance	120.1	μmhos/cm		3,700	48,000	3,800	49,000	<5 U	8.2		
Alkalinity (as CaCO ₃)	310.1	mg/L		1100	1100	980	1200	1500	2000		

Notes:

(a) See Table 3-1.

(b) Dose to desired pH.

(c) Caustic control consisted of 47 mL of caustic (volume for pH 11 adjustment) added to 1-L DI water.

(d) Blank control consisted of 1-L of same DI water used for the lime and caustic controls.

(e) Analysis by ADVENT.

B This flag is used when the analyte is found in the associated method blank as well as in the sample.

E This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

U This flag indicates the analyte was below the detectable limit.

TABLE 4-6. SOLIDS GENERATED DURING CHEMICAL PRECIPITATION JAR TESTS (a)

PARAMETER	UNITS	CHEMICAL PRECIP: SLUDGE - LIME 7/28/2000					CHEMICAL PRECIP: SLUDGE - CAUSTIC 7/28/2000				
		05135-13 pH 7	05135-14 pH 8	05135-15 pH 9	05135-16 pH 10	05135-17 pH 11	05135-18 pH 7	05135-19 pH 8	05135-20 pH 9	05135-21 pH 10	05135-22 pH 11
Settled Sludge Volume	mL	15	31	50	135	150	16	45	110	120	100
Sample Volume	mL	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Mixed TSS	mg/L	4,400	6,900	39,000	22,000	21,000	2,000	5,000	7,500	520	13,000
Settled Sludge TSS (Calc.)	(%)	29	22	78	16	14	13	11	7	0.43	13
Sample pH (by ADVENT)	s.u.	6.99	8.05	9.04	10.09	11.05	6.9	7.98	8.99	10.03	11.03

Note:

(a) Analyses by Savannah unless noted otherwise

TABLE 4-7. SUMMARY OF ACTIVATED SLUDGE BATCH TESTS (a)

TIME (hours)	OUR (mg/L-hr)			COD (mg/L)			NH ₃ -N (mg/L)			NO ₃ -N (mg/L)			pH (s.u.)			CONDUCTIVITY(umhos)		
	UNIT 1	UNIT 2	UNIT 3	UNIT 1	UNIT 2	UNIT 3	UNIT 1	UNIT 2	UNIT 3	UNIT 1	UNIT 2	UNIT 3	UNIT 1	UNIT 2	UNIT 3	UNIT 1	UNIT 2	UNIT 3
0	7.5	9.8	21.8	509	502	495	5.8	5.8	5.0	10	22.5	25	7.53	7.57	7.42	2,380	2,320	1,680
1	4.5	8.5	13.5	501	501	496	6.5	5.5	5.5				7.85	7.86	7.67	2,340	2,280	1,630
2	1.5	8.3	11.6	502	492	481	7.0	6.0	6.0				7.71	7.59	7.59	2,360	2,290	1,700
4	1.0	3.8	10.9	481	486	470	6.5	5.8	6.8				7.87	7.8	7.64	2,380	2,270	1,760
8	4.0	1.0	10.0	481	500	470	6.0	6.3	7.5	35	25	30	7.84	7.8	7.65	2,340	2,380	1,690
14	3.0	0.0	6.0	490	500	468	6.3	6.5	9.8				7.85	7.79	7.73	2,410	2,390	1,770
24	4.0	2.5	7.8	475	465	434	5.8	6.8	11.3	20	20	18	7.70	7.48	7.60	2,600	2,580	1,930
30	3.4	4.0	10.0	444	421	403	5.5	6.0	12.0				7.39	7.42	7.49	2,640	2,610	1,940
48	3.6	3.0	5.7	273	295	270	0.8	2.3	9.5	25	20	33	7.86	7.68	7.64	2,470	2,440	1,700
54	3.0	2.3	6.8	280	295	267	1.8	3.3	10.5				7.33	7.44	7.27	2,540	2,430	1,930
72	2.5	3.0	6.0	276	294	261	2.0	3.5	11.8	28	25	28	7.41	7.44	7.21	2,410	2,300	1,840
76				263	264	271	1.8	3.5	12.0				7.15	7.21	7.02	2,400	2,320	1,800

Notes:

(a) Analyses done by ADVENT.

TABLE 4-8a. CONVENTIONAL AND SPECIFIC ORGANICS RESULTS FOR ACTIVATED SLUDGE BATCH TEST - UNIT 1

PARAMETER	METHOD	UNITS	UNIT 1												CALCULATED INITIAL ^(*)	
			T=0	T=1	T=2	T=4	T=8	T=14	T=24	T=30	T=48	T=54	T=72	T=76		
TCL SEMIVOLATILES																
Phenol	8270	µg/L													<10	321
bis (2-Chloroethyl) ether	8270	µg/L													<10	18
2-Chlorophenol	8270	µg/L													70	32
1,3-Dichlorobenzene	8270	µg/L													0.68 J	18
1,4-Dichlorobenzene	8270	µg/L													11	41
1,2-Dichlorobenzene	8270	µg/L													10	25
2-Methylphenol (o-Cresol)	8270	µg/L													32	8
2,2'-Oxybis(1-Chloropropane)	8270	µg/L													<10	18
3-Methylphenol/4-Methyl-phenol (m&p Cresol)	8270	µg/L													94	33
N-Nitroso-di-n-propylamine	8270	µg/L													<10	18
Hexachloroethane	8270	µg/L													<1.9	3
Nitrobenzene	8270	µg/L													4.9	6
Isophorone	8270	µg/L													<10	18
2-Nitrophenol	8270	µg/L													<10	18
bis (2-Chloroethoxy)methane	8270	µg/L													<10	18
2,4-Dichlorophenol	8270	µg/L													380 E	107
1,2,4-Trichlorobenzene	8270	µg/L													10	207
Naphthalene	8270	µg/L													860 E	18
Hexachlorobutadiene	8270	µg/L													<10	18
4-Chloroaniline	8270	µg/L													2400 E	550
4-Chloro-3-methylphenol	8270	µg/L													<10	18
2-Methylnaphthalene	8270	µg/L													<10	18
Hexachlorocyclopentadiene	8270	µg/L													<10	18
2,4,6-Trichlorophenol	8270	µg/L													180	4
2,4,5-Trichlorophenol	8270	µg/L													9.4 J	18
2-Chloronaphthalene	8270	µg/L													6.1 J	18
2-Nitroaniline	8270	µg/L													<50	86
Dimethylphthalate	8270	µg/L													2.8 J	18
Acenaphthalene	8270	µg/L													<10	18
3-Nitroaniline	8270	µg/L													<50	86
Acenaphthene	8270	µg/L													<10	18
2,4-Dinitrophenol	8270	µg/L													<14	25
4-Nitrophenol	8270	µg/L													47 J	9
Dibenzofuran	8270	µg/L													<10	18
Diethylphthalate	8270	µg/L													4.8 J	3
2,4-Dinitrotoluene	8270	µg/L													<10	18
2,6-Dinitrotoluene	8270	µg/L													<10	18
4-Chlorophenylphenyl ether	8270	µg/L													<10	18
Fluorene	8270	µg/L													<1.0	2
4-Nitroaniline	8270	µg/L													<50	86

TABLE 4-8a. CONVENTIONAL AND SPECIFIC ORGANICS RESULTS FOR ACTIVATED SLUDGE BATCH TEST - UNIT 1

PARAMETER	METHOD	UNITS	UNIT 1												CALCULATED INITIAL ^(a)
			T=0	T=1	T=2	T=4	T=8	T=14	T=24	T=30	T=48	T=54	T=72	T=76	
4,6-Dinitro-2-methylphenol	8270	µg/L											<13		23
N-Nitrosodiphenylamine	8270	µg/L											<5.0		9
4-Bromophenylphenyl ether	8270	µg/L											<1.0		2
Hexachlorobenzene	8270	µg/L											10		19
Pentachlorophenol	8270	µg/L											490 E		371
Phenanthrene	8270	µg/L											0.85 J		1
Anthracene	8270	µg/L											<10		18
Di-n-butylphthalate	8270	µg/L											<10		18
Fluoranthene	8270	µg/L											<10		5
Pyrene	8270	µg/L											<10		6
Butylbenzylphthalate	8270	µg/L											<10		18
3,3'-Dichlorobenzidine	8270	µg/L											<20		36
Benzo (a) anthracene	8270	µg/L											<10		4
bis (2-Ethylhexyl) phthalate	8270	µg/L											5.7		4
Chrysene	8270	µg/L											<10		5
Di-n-octylphthalate	8270	µg/L											<10		18
Benzo (b) fluoranthene	8270	µg/L											<10		3
Benzo (k) fluoranthene	8270	µg/L											<10		3
Benzo (a) pyrene	8270	µg/L											<10		4
Indeno (1,2,3-cd) pyrene	8270	µg/L											<10		18
Dibenzo (a,h) anthracene	8270	µg/L											<10		18
Benzo (g,h, l) perylene	8270	µg/L											<10		2
Carbazole	8270	µg/L											0.65 J		6
CI-PESTICIDES/PCB															
Aldrin	8081	µg/L											<0.25		2
alpha-BHC	8081	µg/L											0.32		1
gamma-BHC (Lindane)	8081	µg/L											1.4		1
delta-BHC	8081	µg/L											<0.06		0.4
Dieldrin	8081	µg/L											<0.50		4
Heptachlor	8081	µg/L											<0.25		2
Heptachlor epoxide	8081	µg/L											<0.25		2
CHLORINATED HERBICIDES															
2,4-D	8151	µg/L											750 E		157
2,4-DB	8151	µg/L											<25		2
2,4,5-T	8151	µg/L											40 P		12
2,4,5-TP	8151	µg/L											<25		2
Dalapon	8151	µg/L											<6000		429
Dicamba	8151	µg/L											1.3 JP		4
Dichloroprop	8151	µg/L											<300		21
Dinoseb	8151	µg/L											0.68 JP		21
MCPP (2- (4-chloro-2-methyl-phenoxyl)-propanoic acid)	8151	µg/L											<3200 JP		786

TABLE 4-8a. CONVENTIONAL AND SPECIFIC ORGANICS RESULTS FOR ACTIVATED SLUDGE BATCH TEST - UNIT 1

PARAMETER	METHOD	UNITS	UNIT 1											CALCULATED INITIAL ^(a)	
			T=0	T=1	T=2	T=4	T=8	T=14	T=24	T=30	T=48	T=54	T=72	T=76	
MCPA ((4-Chloro-2-methyl-phenoxy)-acetic acid)	8151	µg/L												<6000	429
Pentachlorophenol	8151	µg/L												420 E	54
VOLATILES															
Chloromethane	8260	µg/L												<10	1
Bromomethane	8260	µg/L												<9.8	1
Vinyl chloride	8260	µg/L												<10	6
Chloroethane	8260	µg/L												<10	1
Methylene chloride	8260	µg/L												<4.7	1
Acetone	8260	µg/L												280	3143
Carbon Disulfide	8260	µg/L												<5.0	1
1,1-Dichloroethene	8260	µg/L												<5.0	13
1,1-Dichloroethane	8260	µg/L												<5.0	107
Cis/Trans-1, 2-Dichloroethene	8260	µg/L												<5.0	286
1,2-Dichloroethane	8260	µg/L												<5.0	1
2-Butanone	8260	µg/L												15 J	5
Chloroform	8260	µg/L												<5.0	1
1,1,1-Trichloroethane	8260	µg/L												<5.0	264
Carbon Tetrachloride	8260	µg/L												<5.0	1
Bromodichloromethane	8260	µg/L												<5.0	1
1,1,2,2-Tetrachloroethane	8260	µg/L												<5.0	1
1,2-Dichloropropane	8260	µg/L												<5.0	0.2
Trans-1,3-Dichloropropene	8260	µg/L												<5.0	1
Trichloroethene	8260	µg/L												<2.7	27
1,1,2-Trichloroethane	8260	µg/L												<5.0	1
Benzene	8260	µg/L												<1.2	38
Cis-1,3-Dichloropropene	8260	µg/L												<1.0	0.1
Bromoform	8260	µg/L												<5.0	1
2-Hexanone	8260	µg/L												<25	4
4-Methyl-2-pentanone	8260	µg/L												<25	60
Tetrachloroethene	8260	µg/L												<5.0	2
Toluene	8260	µg/L												<5.0	18
Chlorobenzene	8260	µg/L												<2.4	86
Ethylbenzene	8260	µg/L												<5.0	4
Xylenes, Total	8260	µg/L												<5.0	5
Styrene	8260	µg/L												<5.0	1
CONVENTIONALS															
Biochemical Oxygen Demand	405.1/5210B	mg/L												68	44
Total Organic Carbon	415.1	mg/L												85	37
Chemical Oxygen Demand	410.1	mg/L												290	114
Total Kjeldahl Nitrogen-N	351.2	mg/L												7.4	3

Notes:

(a) Assuming one liter of leachate in 14L initial test volume.

TABLE 4-8b. CONVENTIONAL AND SPECIFIC ORGANICS RESULTS FOR ACTIVATED SLUDGE BATCH TEST - UNIT 2

PARAMETER	METHOD	UNITS	UNIT 2												CALCULATED INITIAL ^(a)
			T=0	T=1	T=2	T=4	T=8	T=14	T=24	T=30	T=48	T=54	T=72	T=76	
TCL SEMIVOLATILES															
Phenol	8270	µg/L											48 J		321
bis (2-Chloroethyl) ether	8270	µg/L											<200		18
2-Chlorophenol	8270	µg/L											120 J		32
1,3-Dichlorobenzene	8270	µg/L											<200		18
1,4-Dichlorobenzene	8270	µg/L											<200		41
1,2-Dichlorobenzene	8270	µg/L											21 J		25
2-Methylphenol (o-Cresol)	8270	µg/L											47 J		8
2,2'-Oxybis(1-Chloropropane)	8270	µg/L											<200		18
3-Methylphenol/4-Methyl-phenol (m&p Cresol)	8270	µg/L											120 J		33
N-Nitroso-di-n-propylamine	8270	µg/L											<200		18
Hexachloroethane	8270	µg/L											<38		3
Nitrobenzene	8270	µg/L											<70		6
Isophorone	8270	µg/L											<200		18
2-Nitrophenol	8270	µg/L											<200		18
bis (2-Chloroethoxy)methane	8270	µg/L											<200		18
2,4-Dichlorophenol	8270	µg/L											540		107
1,2,4-Trichlorobenzene	8270	µg/L											13 J		207
Naphthalene	8270	µg/L											1000		18
Hexachlorobutadiene	8270	µg/L											<200		18
4-Chloroaniline	8270	µg/L											5200		550
4-Chloro-3-methylphenol	8270	µg/L											<200		18
2-Methylnaphthalene	8270	µg/L											<200		18
Hexachlorocyclopentadiene	8270	µg/L											<200		18
2,4,6-Trichlorophenol	8270	µg/L											270		4
2,4,5-Trichlorophenol	8270	µg/L											<200		18
2-Chloronaphthalene	8270	µg/L											<200		18
2-Nitroaniline	8270	µg/L											<1000		86
Dimethylphthalate	8270	µg/L											<200		18
Acenaphthalene	8270	µg/L											<200		18
3-Nitroaniline	8270	µg/L											<1000		86
Acenaphthene	8270	µg/L											<200		18
2,4-Dinitrophenol	8270	µg/L											<280		25
4-Nitrophenol	8270	µg/L											<1000		9
Dibenzofuran	8270	µg/L											<200		18
Diethylphthalate	8270	µg/L											<200		3
2,4-Dinitrotoluene	8270	µg/L											<200		18

TABLE 4-8b. CONVENTIONAL AND SPECIFIC ORGANICS RESULTS FOR ACTIVATED SLUDGE BATCH TEST - UNIT 2

PARAMETER	METHOD	UNITS	UNIT 2												CALCULATED INITIAL ^(a)
			T=0	T=1	T=2	T=4	T=8	T=14	T=24	T=30	T=48	T=54	T=72	T=76	
2,6-Dinitrotoluene	8270	µg/L												<200	18
4-Chlorophenylphenyl ether	8270	µg/L												<200	18
Fluorene	8270	µg/L												<20	2
4-Nitroaniline	8270	µg/L												<1000	86
4,6-Dinitro-2-methylphenol	8270	µg/L												<260	23
N-Nitrosodiphenylamine	8270	µg/L												<100	9
4-Bromophenylphenyl ether	8270	µg/L												<20	2
Hexachlorobenzene	8270	µg/L												11 J	19
Pentachlorophenol	8270	µg/L												1100	371
Phenanthrene	8270	µg/L												<200	1
Anthracene	8270	µg/L												<200	18
Di-n-butylphthalate	8270	µg/L												<200	18
Fluoranthene	8270	µg/L												<200	5
Pyrene	8270	µg/L												<200	6
Butylbenzylphthalate	8270	µg/L												<200	18
3,3'-Dichlorobenzidine	8270	µg/L												<400	36
Benzo (a) anthracene	8270	µg/L												<200	4
bis (2-Ethylhexyl) phthalate	8270	µg/L												39	4
Chrysene	8270	µg/L												<200	5
Di-n-octylphthalate	8270	µg/L												<200	18
Benzo (b) fluoranthene	8270	µg/L												<200	3
Benzo (k) fluoranthene	8270	µg/L												<200	3
Benzo (a) pyrene	8270	µg/L												<200	4
Indeno (1,2,3-cd) pyrene	8270	µg/L												<200	18
Dibenzo (a,h) anthracene	8270	µg/L												<200	18
Benzo (g,h, l) perylene	8270	µg/L												<200	2
Carbazole	8270	µg/L												<68	6
Cl-PESTICIDES/PCB															
Aldrin	8081	µg/L												<0.25	2
alpha-BHC	8081	µg/L												0.17 JP	1
gamma-BHC (Lindane)	8081	µg/L												0.11 JP	1
delta-BHC	8081	µg/L												<0.06	0.4
Dieldrin	8081	µg/L												<0.50	4
Heptachlor	8081	µg/L												<0.25	2
Heptachlor epoxide	8081	µg/L												<0.25	2
CHLORINATED HERIBICDES															
2,4-D	8151	µg/L												680 E	157
2,4-DB	8151	µg/L												<25	2

TABLE 4-8b. CONVENTIONAL AND SPECIFIC ORGANICS RESULTS FOR ACTIVATED SLUDGE BATCH TEST - UNIT 2

PARAMETER	METHOD	UNITS	UNIT 2												CALCULATED INITIAL ^(a)
			T=0	T=1	T=2	T=4	T=8	T=14	T=24	T=30	T=48	T=54	T=72	T=76	
2,4,5-T	8151	µg/L												35 P	12
2,4,5-TP	8151	µg/L												<25	2
Dalapon	8151	µg/L												<6000	429
Dicamba	8151	µg/L												1.4 JP	4
Dichloroprop	8151	µg/L												5.0 JP	21
Dinoseb	8151	µg/L												<300	21
MCPP (2- (4-chloro-2-methyl-phenoxyl-propanoic acid)	8151	µg/L												3200 JP	786
MCPA ((4-Chloro-2-mehtyl- phenoxy)-acetic acid)	8151	µg/L												<6000	429
Pentachlorophenol	8151	µg/L												370 E	54
VOLATILES															
Chloromethane	8260	µg/L												<10	1
Bromomethane	8260	µg/L												<9.8	1
Vinyl chloride	8260	µg/L												<10	6
Chloroethane	8260	µg/L												<10	1
Methylene chloride	8260	µg/L												0.39 J	1
Acetone	8260	µg/L												<5.0	3143
Carbon Disulfide	8260	µg/L												<5.0	1
1,1-Dichloroethene	8260	µg/L												<5.0	13
1,1-Dichloroethane	8260	µg/L												<5.0	107
Cis/Trans-1, 2-Dichloroethene	8260	µg/L												<5.0	286
1,2-Dichloroethane	8260	µg/L												<5.0	1
2-Butanone	8260	µg/L												14 J	5
Chloroform	8260	µg/L												<5.0	1
1,1,1-Trichloroethane	8260	µg/L												0.48 J	264
Carbon Tetrachloride	8260	µg/L												<5.0	1
Bromodichloromethane	8260	µg/L												<5.0	1
1,1,2,2-Tetrachloroethane	8260	µg/L												<5.0	1
1,2-Dichloropropane	8260	µg/L												<5.0	0
Trans-1,3-Dichloropropene	8260	µg/L												<5.0	1
Trichloroethene	8260	µg/L												<2.7	27
1,1,2-Trichloroethane	8260	µg/L												<5.0	1
Benzene	8260	µg/L												<1.2	38
Cis-1,3-Dichloropropene	8260	µg/L												<1.0	0
Bromoform	8260	µg/L												<5.0	1
2-Hexanone	8260	µg/L												<25	4
4-Methyl-2-pentanone	8260	µg/L												<25	60

TABLE 4-8b. CONVENTIONAL AND SPECIFIC ORGANICS RESULTS FOR ACTIVATED SLUDGE BATCH TEST - UNIT 2

PARAMETER	METHOD	UNITS	UNIT 2												CALCULATED INITIAL ^(a)	
			T=0	T=1	T=2	T=4	T=8	T=14	T=24	T=30	T=48	T=54	T=72	T=76		
Tetrachloroethene	8260	µg/L													<5.0	2
Toluene	8260	µg/L													<5.0	18
Chlorobenzene	8260	µg/L													4.4 J	86
Ethylbenzene	8260	µg/L													<5.0	4
Xylenes, Total	8260	µg/L													<5.0	5
Styrene	8260	µg/L													<5.0	1
CONVENTIONALS																
Biochemical Oxygen Demand	405.1/5210B	mg/L													69	44
Total Organic Carbon	415.1	mg/L	170	170	160	160	160	160	150	140	98	110	94	90		37
Chemical Oxygen Demand	410.1	mg/L	490	480	490	510	480	490	440	440	330	400	330	320		114
Total Kjeldahl Nitrogen-N	351.2	mg/L													9.5	3

Notes:

(a) Assuming one liter of leachate in 14L initial test volume.

TABLE 4-8c. CONVENTIONAL AND SPECIFIC ORGANICS RESULTS FOR ACTIVATED SLUDGE BATCH TEST - UNIT 3

PARAMETER	METHOD	UNITS	UNIT 3												CALCULATED INITIAL ^(a)	
			T=0	T=1	T=2	T=4	T=8	T=14	T=24	T=30	T=48	T=54	T=72	T=76		
TCL SEMIVOLATILES																
Phenol	8270	µg/L													55 J	321
bis (2-Chloroethyl) ether	8270	µg/L													<200	18
2-Chlorophenol	8270	µg/L													58 J	32
1,3-Dichlorobenzene	8270	µg/L													<200	18
1,4-Dichlorobenzene	8270	µg/L													<200	41
1,2-Dichlorobenzene	8270	µg/L													<200	25
2-Methylphenol (o-Cresol)	8270	µg/L													22 J	8
2,2'-Oxybis(1-Chloropropane)	8270	µg/L													<200	18
3-Methylphenol/4-Methyl-phenol (m&p Cresol)	8270	µg/L													56 J	33
N-Nitroso-di-n-propylamine	8270	µg/L													<200	18
Hexachloroethane	8270	µg/L													<38	3
Nitrobenzene	8270	µg/L													<70	6
Isophorone	8270	µg/L													<200	18
2-Nitrophenol	8270	µg/L													<200	18
bis (2-Chloroethoxy)methane	8270	µg/L													<200	18
2,4-Dichlorophenol	8270	µg/L													540	107
1,2,4-Trichlorobenzene	8270	µg/L													13 J	207
Naphthalene	8270	µg/L													<200	18
Hexachlorobutadiene	8270	µg/L													<200	18
4-Chloroaniline	8270	µg/L													4400	550
4-Chloro-3-methylphenol	8270	µg/L													<200	18
2-Methylnaphthalene	8270	µg/L													<200	18
Hexachlorocyclopentadiene	8270	µg/L													<200	18
2,4,6-Trichlorophenol	8270	µg/L													180	4
2,4,5-Trichlorophenol	8270	µg/L													<200	18
2-Chloronaphthalene	8270	µg/L													<200	18
2-Nitroaniline	8270	µg/L													<1000	86
Dimethylphthalate	8270	µg/L													<200	18
Acenaphthalene	8270	µg/L													<200	18
3-Nitroaniline	8270	µg/L													<1000	86
Acenaphthene	8270	µg/L													<200	18
2,4-Dinitrophenol	8270	µg/L													<280	25
4-Nitrophenol	8270	µg/L													<1000	9
Dibenzofuran	8270	µg/L													<200	18
Diethylphthalate	8270	µg/L													<200	3
2,4-Dinitrotoluene	8270	µg/L													<200	18

TABLE 4-8c. CONVENTIONAL AND SPECIFIC ORGANICS RESULTS FOR ACTIVATED SLUDGE BATCH TEST - UNIT 3

PARAMETER	METHOD	UNITS	UNIT 3												CALCULATED INITIAL ^(a)
			T=0	T=1	T=2	T=4	T=8	T=14	T=24	T=30	T=48	T=54	T=72	T=76	
2,6-Dinitrotoluene	8270	µg/L												<200	18
4-Chlorophenylphenyl ether	8270	µg/L												<200	18
Fluorene	8270	µg/L												<20	2
4-Nitroaniline	8270	µg/L												<1000	86
4,6-Dinitro-2-methylphenol	8270	µg/L												<260	23
N-Nitrosodiphenylamine	8270	µg/L												<100	9
4-Bromophenylphenyl ether	8270	µg/L												<20	2
Hexachlorobenzene	8270	µg/L												17 J	19
Pentachlorophenol	8270	µg/L												410	371
Phenanthrene	8270	µg/L												<200	1
Anthracene	8270	µg/L												<200	18
Di-n-butylphthalate	8270	µg/L												<200	18
Fluoranthene	8270	µg/L												<200	5
Pyrene	8270	µg/L												<200	6
Butylbenzylphthalate	8270	µg/L												<200	18
3,3'-Dichlorobenzidine	8270	µg/L												<400	36
Benzo (a) anthracene	8270	µg/L												<200	4
bis (2-Ethylhexyl) phthalate	8270	µg/L												56	4
Chrysene	8270	µg/L												<200	5
Di-n-octylphthalate	8270	µg/L												<200	18
Benzo (b) fluoranthene	8270	µg/L												<200	3
Benzo (k) fluoranthene	8270	µg/L												<200	3
Benzo (a) pyrene	8270	µg/L												<200	4
Indeno (1,2,3-cd) pyrene	8270	µg/L												<200	18
Dibenzo (a,h) anthracene	8270	µg/L												<200	18
Benzo (g,h, l) perylene	8270	µg/L												<200	2
Carbazole	8270	µg/L												<68	6
CI-PESTICIDES/PCB															
Aldrin	8081	µg/L												<0.05	2
alpha-BHC	8081	µg/L												0.2 P	1
gamma-BHC (Lindane)	8081	µg/L												0.5 P	1
delta-BHC	8081	µg/L												<0.012	0.4
Dieldrin	8081	µg/L												<0.10	4
Heptachlor	8081	µg/L												<0.05	2
Heptachlor epoxide	8081	µg/L												<0.05	2
CHLORINATED HERIBICDES															
2,4-D	8151	µg/L												260 E	157
2,4-DB	8151	µg/L												<25	2

TABLE 4-8c. CONVENTIONAL AND SPECIFIC ORGANICS RESULTS FOR ACTIVATED SLUDGE BATCH TEST - UNIT 3

PARAMETER	METHOD	UNITS	UNIT 3												CALCULATED INITIAL ^(a)	
			T=0	T=1	T=2	T=4	T=8	T=14	T=24	T=30	T=48	T=54	T=72	T=76		
2,4,5-T	8151	µg/L													8.7 JP	12
2,4,5-TP	8151	µg/L													<25	2
Dalapon	8151	µg/L													<6000	429
Dicamba	8151	µg/L													<120	4
Dichloroprop	8151	µg/L													<300	21
Dinoseb	8151	µg/L													<300	21
MCPP (2-(4-chloro-2-methyl-phenoxyl)-propanoic acid)	8151	µg/L													<6000	786
MCPA ((4-Chloro-2-methyl-phenoxy)-acetic acid)	8151	µg/L													<1200	429
Pentachlorophenol	8151	µg/L													230 D	54
VOLATILES																
Chloromethane	8260	µg/L													<10	1
Bromomethane	8260	µg/L													<9.8	1
Vinyl chloride	8260	µg/L													<10	6
Chloroethane	8260	µg/L													1.7 J	1
Methylene chloride	8260	µg/L													0.4 JB	1
Acetone	8260	µg/L													46 J	3143
Carbon Disulfide	8260	µg/L													<5	1
1,1-Dichloroethene	8260	µg/L													<5	13
1,1-Dichloroethane	8260	µg/L													<5	107
Cis/Trans-1, 2-Dichloroethene	8260	µg/L													<5	286
1,2-Dichloroethane	8260	µg/L													<5	1
2-Butanone	8260	µg/L													<25	5
Chloroform	8260	µg/L													<5	1
1,1,1-Trichloroethane	8260	µg/L													0.48 J	264
Carbon Tetrachloride	8260	µg/L													<5	1
Bromodichloromethane	8260	µg/L													<5	1
1,1,2,2-Tetrachloroethane	8260	µg/L													<5	1
1,2-Dichloropropane	8260	µg/L													<5	0
Trans-1,3-Dichloropropene	8260	µg/L													<5	1
Trichloroethene	8260	µg/L													<2.7	27
1,1,2-Trichloroethane	8260	µg/L													<5	1
Benzene	8260	µg/L													<1.2	38
Cis-1,3-Dichloropropene	8260	µg/L													<1	0
Bromoform	8260	µg/L													<5	1
2-Hexanone	8260	µg/L													<25	4
4-Methyl-2-pentanone	8260	µg/L													<25	60

TABLE 4-8c. CONVENTIONAL AND SPECIFIC ORGANICS RESULTS FOR ACTIVATED SLUDGE BATCH TEST - UNIT 3

PARAMETER	METHOD	UNITS	UNIT 3												CALCULATED INITIAL ^(a)	
			T=0	T=1	T=2	T=4	T=8	T=14	T=24	T=30	T=48	T=54	T=72	T=76		
Tetrachloroethene	8260	µg/L													<5	2
Toluene	8260	µg/L													<5	18
Chlorobenzene	8260	µg/L													6.0	86
Ethylbenzene	8260	µg/L													<5	4
Xylenes, Total	8260	µg/L													<5	5
Styrene	8260	µg/L													<5	1
CONVENTIONALS																
Biochemical Oxygen Demand	405.1/5210B	mg/L													460	44
Total Organic Carbon	415.1	mg/L	160	160	160	160	150	150	130	130	92	110	88	82		37
Chemical Oxygen Demand	410.1	mg/L	470	460	470	470	460	440	530	410	300	290	280	270		114
Total Kjeldahl Nitrogen-N	351.2	mg/L													17	3

Notes:

(a) Assuming one liter of leachate in 14L initial test volume.

TABLE 4-9. HYDROGEN PEROXIDE BATCH OXIDATION TEST COD RESULTS (a)

Time (hrs)	pH 4 COD (mg/L)	pH 7 COD (mg/L)	pH 4 COD Removal (%)	pH 7 COD Removal (%)	pH 4 TSS (mg/L)	pH 7 TSS (mg/L)
0	1,779	1,779			260	260
1	196	908	89	49		
2	190	1,000	89	44		
3	300	398	83	78		
4	200	240	89	87	9,000	2,700

Notes:

(a) Analyses by ADVENT.

TABLE 4-10. HYDROGEN PEROXIDE BATCH OXIDATION TEST RESULTS^(a,b)

PARAMETER	METHOD	UNITS	SAMPLE ID					
			PEROXIDE OXIDATION					
			25-Aug-00					
			05878-1	05878-2	05878-2-DL	Combined Leachate Initial Conc. ^(c)		
pH 4								
pH 7								
pH 7 DIL.								
TCL SEMIVOLATILES								
Phenol	8270	µg/L	1.2 J	720 E	1000 D	4500		
bis (2-Chloroethyl) ether	8270	µg/L	<10 U	110	<100 U	<250		
2-Chlorophenol	8270	µg/L	10	180	190 D	450		
1,3-Dichlorobenzene	8270	µg/L	3.5 J	1.7 J	<100 U	<250		
1,4-Dichlorobenzene	8270	µg/L	3.5 J	54	59 DJ	570		
1,2-Dichlorobenzene	8270	µg/L	1.9 J	41	45 DJ	350		
2-Methylphenol (o-Cresol)	8270	µg/L	<10 U	78	70 DJ	110		
2,2'-Oxybis(1-Chloropropane)	8270	µg/L	<10 U	<10 U	<100 U	<250		
3-Methylphenol/4-Methyl-phenol (m&p Cresol)	8270	µg/L	<10 U	150	140 D	<460		
N-Nitroso-di-n-propylamine	8270	µg/L	<10 U	<10 U	<100 U	<250		
Hexachloroethane	8270	µg/L	<1.9 U	<1.9 U	<19 U	<48		
Nitrobenzene	8270	µg/L	3.5 U	19	18 DJ	<88		
Isophorone	8270	µg/L	<10 U	<10 U	<100 U	<250		
2-Nitrophenol	8270	µg/L	<10 U	<10 U	<100 U	<250		
bis (2-Chloroethoxy)methane	8270	µg/L	<10 U	<10 U	<100 U	<250		
2,4-Dichlorophenol	8270	µg/L	1 J	440 E	480 D	1500		
1,2,4-Trichlorobenzene	8270	µg/L	35	210	250	2900		
Naphthalene	8270	µg/L	<10 U	410 E	480 D	<250		
Hexachlorobutadiene	8270	µg/L	<10 U	<10 U	<100 U	<250		
4-Chloroaniline	8270	µg/L	<20 U	88	<200 U	7700		
4-Chloro-3-methylphenol	8270	µg/L	<10 U	<10 U	<100 U	<250		
2-Methylnaphthalene	8270	µg/L	<10 U	<10 U	<100 U	<250		
Hexachlorocyclopentadiene	8270	µg/L	<10 U	<10 U	<100 U	<250		
2,4,6-Trichlorophenol	8270	µg/L	0.8 J	200	260 D	<52		
2,4,5-Trichlorophenol	8270	µg/L	0.9 J	54	70 DJ	<250		
2-Chloronaphthalene	8270	µg/L	<10 U	<10 U	<100 U	<250		
2-Nitroaniline	8270	µg/L	<50 U	<50 U	<500 U	<1200		
Dimethylphthalate	8270	µg/L	<10 U	<10 U	16 DJ	<250		
Acenaphthalene	8270	µg/L	<10 U	<10 U	<100 U	<250		
3-Nitroaniline	8270	µg/L	<50 U	<50 U	<500 U	<1200		
Acenaphthene	8270	µg/L	<10 U	<10 U	<100 U	<250		
2,4-Dinitrophenol	8270	µg/L	<14 U	<14 U	<140 U	<350		
4-Nitrophenol	8270	µg/L	<50 U	<50 U	<500 U	130		
Dibenzofuran	8270	µg/L	<10 U	<10 U	<100 U	<250		
Diethylphthalate	8270	µg/L	<10 U	<10 U	<100 U	42		
2,4-Dinitrotoluene	8270	µg/L	<10 U	<10 U	<100 U	<250		
2,6-Dinitrotoluene	8270	µg/L	<10 U	20	21 DJ	<250		
4-Chlorophenylphenyl ether	8270	µg/L	<10 U	<10 U	<100 U	<250		
Fluorene	8270	µg/L	<1.0 U	<1.0 U	<10 U	<25		
4-Nitroaniline	8270	µg/L	<50 U	<50 U	<500 U	<1200		
4,6-Dinitro-2-methylphenol	8270	µg/L	<13 U	<13 U	<130 U	<320		
N-Nitrosodiphenylamine	8270	µg/L	<5.0 U	5.3	<50 U	<120		
4-Bromophenylphenyl ether	8270	µg/L	<1.0 U	<1.0 U	<10 U	<25		
Hexachlorobenzene	8270	µg/L	6 J	1.8 J	<100 U	260		
Pentachlorophenol	8270	µg/L	38	1700 E	2700 D	5200		
Phenanthrene	8270	µg/L	<10 U	<10 U	<100 U	14		
Anthracene	8270	µg/L	<10 U	<10 U	<100 U	<250		
Di-n-butylphthalate	8270	µg/L	0.93 J	<10 U	<100 U	<250		
Fluoranthene	8270	µg/L	0.8 J	<10 U	<100 U	72		
Pyrene	8270	µg/L	1.3 J	<10 U	<100 U	86		
Butylbenzylphthalate	8270	µg/L	0.97 J	<10 U	<100 U	<250		
3,3'-Dichlorobenzidine	8270	µg/L	<20 U	<20 U	<200 U	<500		

TABLE 4-10. HYDROGEN PEROXIDE BATCH OXIDATION TEST RESULTS^(a,b)

PARAMETER	METHOD	UNITS	SAMPLE ID			
			PEROXIDE OXIDATION			
			05878-1 pH 4	05878-2 pH 7	05878-2-DL pH 7 DIL.	Combined Leachate Initial Conc. ^(c)
Benzo (a) anthracene	8270	µg/L	0.75 J	<10 U	<100 U	51
bis (2-Ethylhexyl) phthalate	8270	µg/L	1.4 J	<1.8 U	<18 U	56
Chrysene	8270	µg/L	1 J	<10 U	<100 U	63
Di-n-octylphthalate	8270	µg/L	<10 U	<10 U	<100 U	<250
Benzo (b) fluoranthene	8270	µg/L	<10 U	<10 U	<100 U	41
Benzo (k) fluoranthene	8270	µg/L	1.3 J	<10 U	<100 U	40
Benzo (a) pyrene	8270	µg/L	1.4 J	<10 U	<100 U	53
Indeno (1,2,3-cd) pyrene	8270	µg/L	<10 U	<10 U	<100 U	<250
Dibenzo (a,h) anthracene	8270	µg/L	<10 U	<10 U	<100 U	<250
Benzo (g,h, i) perylene	8270	µg/L	1.9 J	<10 U	<100 U	32
Carbazole	8270	µg/L	<1 J	<3.4 U	<34 U	<85
POLYCHLORINATED BIPHENYLS						
Monochlorobiphenyl	680	µg/L				0.36
Dichlorobiphenyl	680	µg/L				0.1
Trichlorobiphenyl	680	µg/L				0.08 J
Tetrachlorobiphenyl	680	µg/L				0.91
Pentachlorobiphenyl	680	µg/L				3.1
Hexachlorobiphenyl	680	µg/L				2.9
Heptachlorobiphenyl	680	µg/L				0.95
Octachlorobiphenyl	680	µg/L				0.3
Nonachlorobiphenyl	680	µg/L				<0.5
Decachlorobiphenyl	680	µg/L				<0.5
CI-PESTICIDES/PCB						
Aldrin	8081	µg/L	<0.05	<0.05		
alpha-BHC	8081	µg/L	<0.039	0.61		
gamma-BHC (Lindane)	8081	µg/L	<0.019	<0.019		
delta-BHC	8081	µg/L	<0.012	<0.012		
Dieldrin	8081	µg/L	<0.10	<0.10		
Heptachlor	8081	µg/L	<0.05	<0.05		
Heptachlor epoxide	8081	µg/L	<0.05	<0.05		
CHLORINATED HERIBICDES						
2,4-D	8151	µg/L	<5	650 E	<330 D	<2200.0 EP
2,4-DB	8151	µg/L	<5	<50	<200	<25
2,4,5-T	8151	µg/L	<5	88 P	69 DJ	170 P
2,4,5-TP	8151	µg/L	<5	<50	<200	<25
Dalapon	8151	µg/L	<1200	<12000	<48000	<6000
Dicamba	8151	µg/L	<12	<120	<480	<60
Dichloroprop	8151	µg/L	<60	<600	<2400	<300
Dinoseb	8151	µg/L	<60	<600	<2400	<300
MCPP (2- (4-chloro-2-methyl-phenoxyl-propanoic acid)	8151	µg/L	1800 P	<12000	<48000	<11000 P
MCPA ((4-Chloro-2-methyl-phenoxy)-acetic acid)	8151	µg/L	<1200	37000 P	35000 DJP	<6000
Pentachlorophenol	8151	µg/L	19 P	300	<200 DJ	760 E
VOLATILES						
Chloromethane	8260	µg/L	<20	<20	<200	<20
Bromomethane	8260	µg/L	<20	<20	<200	<20
Vinyl chloride	8260	µg/L	<20	<20	<200	88
Chloroethane	8260	µg/L	<20	<20	<200	<20
Methylene chloride	8260	µg/L	<9.4	<9.4	<94	7.1 JB
Acetone	8260	µg/L	1200 E	<6400 E	6000 D	44000 E
Carbon Disulfide	8260	µg/L	<10	<10	<100	<10
1,1-Dichloroethene	8260	µg/L	<10	<10	<100	180
1,1-Dichloroethane	8260	µg/L	1.1 J	28	24 DJ	1500 E

TABLE 4-10. HYDROGEN PEROXIDE BATCH OXIDATION TEST RESULTS^(a,b)

PARAMETER	METHOD	UNITS	SAMPLE ID			
			PEROXIDE OXIDATION			
			25-Aug-00			
			05878-1	05878-2	05878-2-DL	Combined Leachate Initial Conc. ^(c)
			pH 4	pH 7	pH 7 DIL.	
Cis/Trans-1, 2-Dichloroethene	8260	µg/L	<10	28	24 DJ	4000 E
1,2-Dichloroethane	8260	µg/L	<10	<10	<100	10
2-Butanone	8260	µg/L	<50	89	<500	65
Chloroform	8260	µg/L	<10	<10	<100	16
1,1,1-Trichloroethane	8260	µg/L	61	72	59 DJ	3700 E
Carbon Tetrachloride	8260	µg/L	<10	<10	<100	10
Bromodichloromethane	8260	µg/L	<10	<10	<100	10
1,1,2,2-Tetrachloroethane	8260	µg/L	<10	<10	<100	10
1,2-Dichloropropane	8260	µg/L	<10	<10	<100	2 JB
Trans-1,3-Dichloropropene	8260	µg/L	<10	<10	<100	10
Trichloroethene	8260	µg/L	<5.4	3.6 J	<54	380
1,1,2-Trichloroethane	8260	µg/L	<10	1.9 J	<100	17
Benzene	8260	µg/L	<2.4	5.7	6.5 DJ	530 E
Cis-1,3-Dichloropropene	8260	µg/L	<2	<2	<20	2
Bromoform	8260	µg/L	<10	<10	<100	10
2-Hexanone	8260	µg/L	<50	<50	<500	50
4-Methyl-2-pentanone	8260	µg/L	<50	150	<500	840
Tetrachloroethene	8260	µg/L	<10	<10	<100	25
Toluene	8260	µg/L	<10	3.5 J	<100	250
Chlorobenzene	8260	µg/L	1.5 J	29	24 DJ	1200 E
Ethylbenzene	8260	µg/L	<10	1.8 J	<100	52
Xylenes, Total	8260	µg/L	<10	<10	<100	76
Styrene			<10	<10	<100	10
CONVENTIONALS						
Cyanide, Total	160.2	mg/L	0.18	0.15		0
Suspended Solids	160.2	mg/L	8	40		260
Biochemical Oxygen Demand	405.1/5210B	mg/L	77	300		610
Total Dissolved Solids	160.1	mg/L				3100
Volatile Solids	160.4	mg/L				70
Total Organic Carbon	415.1	mg/L	140	340		520
Chemical Oxygen Demand	410.1	mg/L	350	1100		1600
Total Kjeldahl Nitrogen-N	351.2	mg/L				39
Nitrate-N	353.2	mg/L				0
Ammonia (as N)	350.1	mg/L				
Sulfate as SO ₄	300.0	mg/L				330
Nitrite-N	353.2	mg/L				0
Chloride	325.2	mg/L				610
pH	150.1	s.u.				
Specific Conductance	120.1	µmhos/cm				4300
Ortho-Phosphate-P	365.1	mg/L				0
Color, True	110.2	PCU				880
Total Dissolved Inorganic Solids	2540C/E	mg/L				960
Alkalinity (as CaCO ₃)	310.1	mg/L				770
DIOXINS						
2378-TCDD	MIT2	ppq	<0.9	<0.8		<0.5
12378-PeCDD	MIT2	ppq	11	19.6		<0.5
123478-HxCDD	MIT2	ppq	<0.9	<0.8		<1.0
123678-HxCDD	MIT2	ppq	229	149		24680
123789-HxCDD	MIT2	ppq	86.0	38.5		5770
1234678-HpCDD	MIT2	ppq	11530	6350		727290
12346789-OCDD	MIT2	ppq	114580	55750		3457430
2378-TCDF	MIT2	ppq	45.4	158		1510
12378-PeCDF	MIT2	ppq	<0.7	<0.6		943
23478-PeCDF	MIT2	ppq	40.9	40.2		948

TABLE 4-10. HYDROGEN PEROXIDE BATCH OXIDATION TEST RESULTS^(a,b)

PARAMETER	METHOD	UNITS	SAMPLE ID			
			PEROXIDE OXIDATION			
			25-Aug-00			
			05878-1	05878-2	05878-2-DL	Combined Leachate Initial Conc. ^(c)
		pH 4	pH 7	pH 7 DIL.		
123478-HxCDF	MIT2	ppq	363	237		18280
123678-HxCDF	MIT2	ppq	102	80.7		4650
234678-HxCDF	MIT2	ppq	73.6	58.3		3250
123789-HxCDF	MIT2	ppq	<0.7	23.9		<0.6
1234678-HpCDF	MIT2	ppq	2590	1480		235140
1234789-HpCDF	MIT2	ppq	303	205.0		28770
12346789-OCDF	MIT2	ppq	19400	9840		2148820
TOTAL TCDD	MIT2	ppq	66	51.0		5170
TOTAL PeCDD	MIT2	ppq	21	8220		390
TOTAL HxCDD	MIT2	ppq	1110	687.0		108350
TOTAL HpCDD	MIT2	ppq	22610	12540		1969730
TOTAL TCDF	MIT2	ppq	232	1120		6210
TOTAL PeCDF	MIT2	ppq	262	535.0		5260
TOTAL HxCDF	MIT2	ppq	1960	1490		111810
TOTAL HpCDF	MIT2	ppq	12690	7680		1067270

Notes:

(a) Dioxins analyzed by Triangle Laboratones, Durham, North Carolina All other analyses by Savannah Laboratones, Savannah, Georgia

(b) Definition of Organic Data Qualifiers.

(c) See Table 3-1

J This flag indicates an estimated value. This flag used (1) when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the CRQL but greater than zero, and (3) when the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL but greater than zero.

P This flag is used for pesticide/Aroclor target analyte when there is greater than 40% RPD for detected concentrations between the two GC columns

B This flag is used when the analyte is found in the associated method blank as well as in the sample

E This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis

D If a sample or extract is reanalyzed at a higher dilution factor, the DL suffix is appended to the sample number of the Form I for the more diluted sample, and all reported concentrations on that Form I are flagged with the D flag

X Laboratory defined flag

S This flag indicates that the reported value was determined by the Method of Standard Additions (MSA)

RE = Rerun

DL = Dilution

TABLE 4-11. OZONE BATCH OXIDATION TEST COD RESULTS(a)

Time (hrs)	pH 7 COD (mg/L)	pH 9 COD (mg/L)	pH 7 COD REMOVAL (%)	pH 9 COD REMOVAL (%)	pH 7 TSS (mg/L)	pH 9 TSS (mg/L)
0	1,779	1,779			260	260
1		1,424		20		
2		1,424		20		
4		1,304		27		
22		1,234		31		
23	1,280		28			
26		1,234		31		
48		1,236		31		12 000
73	1,220		31		1,200	

Notes:

(a) Analyses by ADVENT.

TABLE 4-12. OZONE BATCH OXIDATION TEST RESULTS

PARAMETER	METHOD	UNITS	SAMPLE ID			
			OZONE OXIDATION			
			28-Aug-00			
			05976-1	05976-2	05976-2-DL	COMBINED LEACHATE INITIAL CONC. (c)
TCL SEMIVOLATILES						
Phenol	8270	µg/L	4600 E	5500 E	4900 D	4500
bis (2-Chloroethyl) ether	8270	µg/L	<100	<100	<400	<250
2-Chlorophenol	8270	µg/L	360	540	460 D	450
1,3-Dichlorobenzene	8270	µg/L	<100	<100	<400	<250
1,4-Dichlorobenzene	8270	µg/L	<100	<100	<400	570
1,2-Dichlorobenzene	8270	µg/L	9.7 J	<100	<400	350
2-Methylphenol (o-Cresol)	8270	µg/L	110	150	110 DJ	110
2,2'-Oxybis(1-Chloropropane)	8270	µg/L	<100	<100	<400	<250
3-Methylphenol/4-Methyl-phenol (m&p Cresol)	8270	µg/L	590	<100	510 D	<460
N-Nitroso-di-n-propylamine	8270	µg/L	<100	<100	<400	<250
Hexachloroethane	8270	µg/L	<19	<19	<76	<48
Nitrobenzene	8270	µg/L	20 J	42	<140	<88
Isophorone	8270	µg/L	<100	<100	<400	<250
2-Nitrophenol	8270	µg/L	<100	<100	<400	<250
bis (2-Chloroethoxy)methane	8270	µg/L	<100	<100	<400	<250
2,4-Dichlorophenol	8270	µg/L	1300	1800	1500 D	1500
1,2,4-Trichlorobenzene	8270	µg/L	10 J	15 J	<400	2900
Naphthalene	8270	µg/L	<100	<100	<400	<250
Hexachlorobutadiene	8270	µg/L	<100	<100	<400	<250
4-Chloroaniline	8270	µg/L	3700 E	7200 E	3900 D	7700
4-Chloro-3-methylphenol	8270	µg/L	<100	<100	<400	<250
2-Methylnaphthalene	8270	µg/L	<100	<100	<400	<250
Hexachlorocyclopentadiene	8270	µg/L	<100	<100	<400	<250
2,4,6-Trichlorophenol	8270	µg/L	830	950	1100 D	<52
2,4,5-Trichlorophenol	8270	µg/L	55 J	<100	<400	<250
2-Chloronaphthalene	8270	µg/L	<100	<100	<400	<250
2-Nitroaniline	8270	µg/L	<500	<500	<2000	<1200
Dimethylphthalate	8270	µg/L	<100	<100	<400	<250
Acenaphthalene	8270	µg/L	<100	<100	<400	<250
3-Nitroaniline	8270	µg/L	<500	<500	<2000	<1200
Acenaphthene	8270	µg/L	<100	<100	<400	<250
2,4-Dinitrophenol	8270	µg/L	<140	<140	<560	<350
4-Nitrophenol	8270	µg/L	260 J	<500	<2000	130
Dibenzofuran	8270	µg/L	<100	<100	<400	<250
Diethylphthalate	8270	µg/L	65 J	80 J	<400	42
2,4-Dinitrotoluene	8270	µg/L	<100	<100	<400	<250
2,6-Dinitrotoluene	8270	µg/L	<100	<100	<400	<250
4-Chlorophenylphenyl ether	8270	µg/L	<100	<100	<400	<250
Fluorene	8270	µg/L	<10	<10	<40	<25
4-Nitroaniline	8270	µg/L	<500	<500	<2000	<1200
4,6-Dinitro-2-methylphenol	8270	µg/L	<130	<130	<520	<320
N-Nitrosodiphenylamine	8270	µg/L	<50	<50	<200	<120
4-Bromophenylphenyl ether	8270	µg/L	<10	<10	<40	<25
Hexachlorobenzene	8270	µg/L	23 J	30 J	<400	260
Pentachlorophenol	8270	µg/L	5100 E	6100 E	8100 D	5200
Phenanthrrene	8270	µg/L	<100	<100	<400	14
Anthracene	8270	µg/L	<100	<100	<400	<250
Di-n-butylphthalate	8270	µg/L	<100	<100	<400	<250
Fluoranthene	8270	µg/L	<100	<100	<400	72
Pyrene	8270	µg/L	<100	<100	<400	86
Butylbenzylphthalate	8270	µg/L	<100	<100	<400	<250

TABLE 4-12. OZONE BATCH OXIDATION TEST RESULTS

PARAMETER	METHOD	UNITS	SAMPLE ID			
			OZONE OXIDATION			
			28-Aug-00			
			05976-1	05976-2	05976-2-DL	COMBINED LEACHATE INITIAL CONC. (E)
			pH 7	pH 9	pH 9 DIL.	
3,3'-Dichlorobenzidine	8270	µg/L	<200	<200	<800	<500
Benzo (a) anthracene	8270	µg/L	<100	<100	<400	51
bis (2-Ethylhexyl) phthalate	8270	µg/L	8.5 JB	<18	44 DJB	56
Chrysene	8270	µg/L	<100	<100	<400	63
Di-n-octylphthalate	8270	µg/L	4.4 J	<100	<400	<250
Benzo (b) fluoranthene	8270	µg/L	<100	<100	<400	41
Benzo (k) fluoranthene	8270	µg/L	<100	<100	<400	40
Benzo (a) pyrene	8270	µg/L	<100	<100	<400	53
Indeno (1,2,3-cd) pyrene	8270	µg/L	<100	<100	<400	<250
Dibenzo (a,h) anthracene	8270	µg/L	<100	<100	<400	<250
Benzo (g,h,l) perylene	8270	µg/L	<100	<100	<400	32
Carbazole	8270	µg/L	<34	<34	<140	<85
POLYCHLORINATED BIPHENYLS						
Monochlorobiphenyl	680	µg/L				0.36
Dichlorobiphenyl	680	µg/L				0.1
Trichlorobiphenyl	680	µg/L				0.08 J
Tetrachlorobiphenyl	680	µg/L				0.91
Pentachlorobiphenyl	680	µg/L				3.1
Hexachlorobiphenyl	680	µg/L				2.9
Heptachlorobiphenyl	680	µg/L				0.95
Octachlorobiphenyl	680	µg/L				0.3
Nonachlorobiphenyl	680	µg/L				<0.5
Decachlorobiphenyl	680	µg/L				<0.5
CI-PESTICIDES/PCB						
Aldrin	8081	µg/L	<0.25	<0.25		
alpha-BHC	8081	µg/L	0.43 P	1.3		
gamma-BHC (Lindane)	8081	µg/L	<0.095	<0.095		
delta-BHC	8081	µg/L	<0.06	<0.06		
Dieldrin	8081	µg/L	<0.50	<0.50		
Heptachlor	8081	µg/L	<0.25	<0.25		
Heptachlor epoxide	8081	µg/L	<0.25	<0.25		
CHLORINATED HERIBICIDES						
2,4-D	8151	µg/L	1400 EP	1700 EP	1500 D	<2200 EP
2,4-DB	8151	µg/L	<50	<50	<500	<25
2,4,5-T	8151	µg/L	370 P	320 P	120 DJP	170 P
2,4,5-TP	8151	µg/L	<50	<50	<500	<25
Dalapon	8151	µg/L	<12000	<12000	<120000	<6000
Dicamba	8151	µg/L	<120	<120	<1200	<60
Dichloroprop	8151	µg/L	<600	<600	<6000	<300
Dinoseb	8151	µg/L	<600	<600	<6000	<300
MCPP (2- (4-chloro-2-methyl-phenoxyl-propanoic acid)	8151	µg/L	11000 JP	<12000	<120000	<11000 P
MCPA ((4-Chloro-2-methyl-phenoxy)-acetic acid)	8151	µg/L	100000 EP	91000 EP	130000 EP	<6000
Pentachlorophenol	8151	µg/L	320	390	300 DJ	760 E

TABLE 4-12. OZONE BATCH OXIDATION TEST RESULTS

PARAMETER	METHOD	UNITS	SAMPLE ID			
			OZONE OXIDATION			
			28-Aug-00			
			05976-1	05976-2	05976-2-DL	COMBINED LEACHATE INITIAL CONC. (c)
VOLATILES						
Chloromethane	8260	µg/L	<20	<20	<100	<20
Bromomethane	8260	µg/L	<20	<20	<98	<20
Vinyl chloride	8260	µg/L	20	<20	<100	88
Chloroethane	8260	µg/L	<20	<20	<100	<20
Methylene chloride	8260	µg/L	<9.4	<9.4	<47	7.1 JB
Acetone	8260	µg/L	2000 E	2700 E	2400 D	44000 E
Carbon Disulfide	8260	µg/L	<10	<10	<50	<10
1,1-Dichloroethene	8260	µg/L	<10	<10	<50	180
1,1-Dichloroethane	8260	µg/L	<10	<10	<50	1500 E
Cis/Trans-1,2-Dichloroethene	8260	µg/L	<10	<10	<50	4000 E
1,2-Dichloroethane	8260	µg/L	<10	<10	<50	<10
2-Butanone	8260	µg/L	35 J	30 J	<250	65
Chloroform	8260	µg/L	<10	<10	<50	16
1,1,1-Trichloroethane	8260	µg/L	<10	<10	<50	3700 E
Carbon Tetrachloride	8260	µg/L	<10	<10	<50	<10
Bromodichloromethane	8260	µg/L	<10	<10	<50	<10
1,1,2,2-Tetrachloroethane	8260	µg/L	<10	<10	<50	<10
1,2-Dichloropropane	8260	µg/L	<10	<10	<50	2.4 JB
Trans-1,3-Dichloropropene	8260	µg/L	<10	<10	<50	<10
Trichloroethene	8260	µg/L	<5.4	<5.4	<27	380
1,1,2-Trichloroethane	8260	µg/L	<10	<10	<50	17
Benzene	8260	µg/L	<2.4	<2.4	<12	530 E
Cis-1,3-Dichloropropene	8260	µg/L	<2	<2	<10	<2
Bromoform	8260	µg/L	<10	<10	<50	<10
2-Hexanone	8260	µg/L	<50	<50	<250	<50
4-Methyl-2-pentanone	8260	µg/L	<50	30 J	<250	840
Tetrachloroethene	8260	µg/L	<10	<10	<50	25
Toluene	8260	µg/L	<10	<10	<50	250
Chlorobenzene	8260	µg/L	5.6 J	4.1 J	6.5 DJ	1200 E
Ethylbenzene	8260	µg/L	<10	<10	<50	52
Xylenes, Total	8260	µg/L	<10	<10	<50	<76
Styrene			<10	<10	<50	<10
CONVENTIONALS						
Cyanide, Total	160.2	mg/L	0.021	0.013		0.012
Suspended Solids	160.2	mg/L	57	59		260
Biochemical Oxygen Demand	405.1/5210B	mg/L	480	520		610
Total Dissolved Solids	160.1	mg/L				3100
Volatile Solids	160.4	mg/L				70
Total Organic Carbon	415.1	mg/L	450	480		520
Chemical Oxygen Demand	410.1	mg/L	1700	1600		1600
Total Kjeldahl Nitrogen-N	351.2	mg/L				39
Nitrate-N	353.2	mg/L				0.056
Ammonia (as N)	350.1	mg/L				
Sulfate as SO ₄	300.0	mg/L				330
Nitrite-N	353.2	mg/L				<0.05
Chloride	325.2	mg/L				610
pH	150.1	s.u.				
Specific Conductance	120.1	µmhos/cm				4300
Ortho-Phosphate-P	365.1	mg/L				0.2
Color, True	110.2	PCU				880
Total Dissolved Inorganic Solids	2540C/E	mg/L				960
Alkalinity (as CaCO ₃)	310.1	mg/L				770

TABLE 4-12. OZONE BATCH OXIDATION TEST RESULTS

PARAMETER	METHOD	UNITS	SAMPLE ID			
			OZONE OXIDATION			
			28-Aug-00			
			05976-1	05976-2	05976-2-DL	COMBINED LEACHATE INITIAL CONC. ^(c)
DIOXINS						
2378-TCDD	MIT2	ppq	1.2	<4.0		<0.5
12378-PeCDD	MIT2	ppq	44.0	<4.8		<0.5
123478-HxCDD	MIT2	ppq	<1.7	<6.8		<1.0
123678-HxCDD	MIT2	ppq	1310	920		24680
123789-HxCDD	MIT2	ppq	304.0	274		5770
1234678-HpCDD	MIT2	ppq	53720	42490		727290
12346789-OCDD	MIT2	ppq	228590	335190		3457430
2378-TCDF	MIT2	ppq	226.0	177		1510
12378-PeCDF	MIT2	ppq	<0.9	<3.0		943
23478-PeCDF	MIT2	ppq	174.0	138		948
123478-HxCDF	MIT2	ppq	1970.0	1720		18280
123678-HxCDF	MIT2	ppq	566.0	458		4650
234678-HxCDF	MIT2	ppq	357.0	302		3250
123789-HxCDF	MIT2	ppq	<1.1	50		<0.6
1234678-HpCDF	MIT2	ppq	12280	11550		235140
1234789-HpCDF	MIT2	ppq	1740	1480		28770
12346789-OCDF	MIT2	ppq	106680	69110		2148820
TOTAL TCDD	MIT2	ppq	460.0	360		5170
TOTAL PeCDD	MIT2	ppq	44.0	62360		390
TOTAL HxCDD	MIT2	ppq	5730	4470		108350
TOTAL HpCDD	MIT2	ppq	103360	83640		1969730
TOTAL TCDF	MIT2	ppq	906.0	722		6210
TOTAL PeCDF	MIT2	ppq	837.0	885		5260
TOTAL HxCDF	MIT2	ppq	10440	8320		111810
TOTAL HpCDF	MIT2	ppq	62590	54850		1067270

Notes:

(a) Dioxins analyzed by Triangle Laboratories, Durham, North Carolina. All other analyses by Savannah Laboratories, Savannah, Georgia.

(b) Definition of Organic Data Qualifiers.

(c) See Table 3-1

J This flag indicates an estimated value. This flag used (1) when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/M identification criteria, and the result is less than the CRQL but greater than zero, and (3) when the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL but greater than zero.

P This flag is used for pesticide/Aroclor target analyte when there is greater than 40% RPD for detected concentrations between the two GC columns.

B This flag is used when the analyte is found in the associated method blank as well as in the sample.

E This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

D If a sample or extract is reanalyzed at a higher dilution factor, the DL suffix is appended to the sample number of the Form I for the more diluted sample and all reported concentrations on that Form I are flagged with the D flag.

X Laboratory defined flag.

S This flag indicates that the reported value was determined by the Method of Standard Additions (MSA).

RE = Rerun

DL = Dilution

TABLE 4-13. BATCH FILTRATION TEST RESULTS

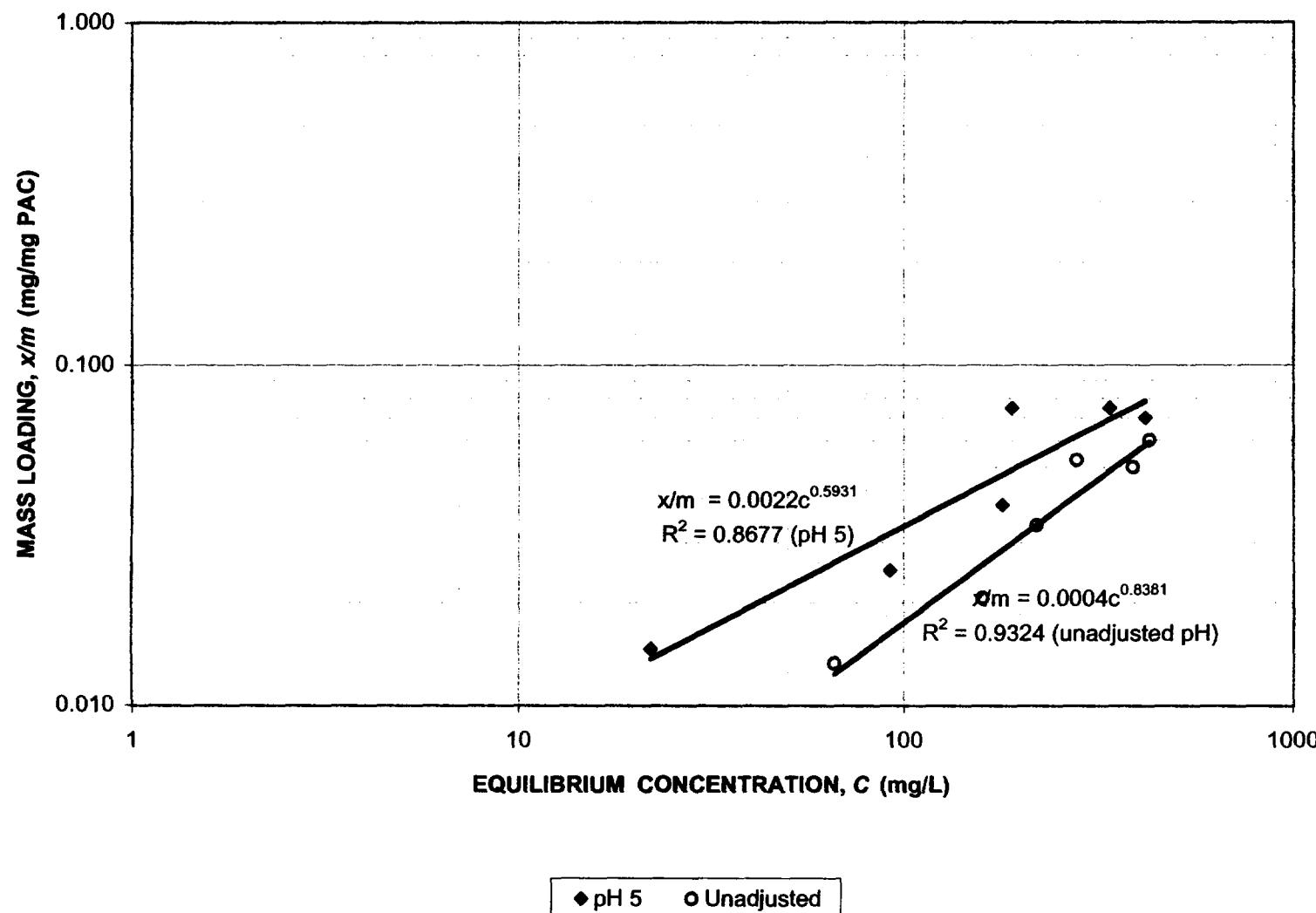
PARAMETER	INITIAL	METHOD	UNITS	TREATED SAMPLE ID			
				0.45 µm	1.5 µm	10 µm	
				05067-7	05067-8	05067-9	05067-9-RE
TSS	260	160.2	mg/L				
TSS (by ADVENT)	126.5		mg/L	0	0	2	
PCBs							
Aroclor-1016	<1.0	8082	mg/L	<1.0	<1.0	<1.0	<1.0
Aroclor-1221	<2.0	8082	mg/L	<2.0	<2.0	<2.0	<2.0
Aroclor-1232	<1.0	8082	mg/L	<1.0	<1.0	<1.0	<1.0
Aroclor-1242	<1.0	8082	mg/L	<1.0	<1.0	<1.0	<1.0
Aroclor-1248	<1.0	8082	mg/L	<1.0	<1.0	<1.0	<1.0
Aroclor-1254	5.3	8082	mg/L	<1.0	<1.0	<1.0	<1.0
Aroclor-1260	8.2	8082	mg/L	<1.0	<1.0	<1.0	<1.0

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DOCUMENT VARIATION	<input checked="" type="checkbox"/> COLOR <input type="checkbox"/> RESOLUTION
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COMMENT(S)	

**FIGURE 4-1. ACTIVATED CARBON ADSORPTION FREUNDLICH ISOTHERM
FOR SAUGET AREA 1 LEACHATE (TOC BASIS)**



**FIGURE 4-2. ACTIVATED CARBON ADSORPTION FREUNDLICH ISOTHERM
FOR SAUGET AREA 1 LEACHATE (COD BASIS)**

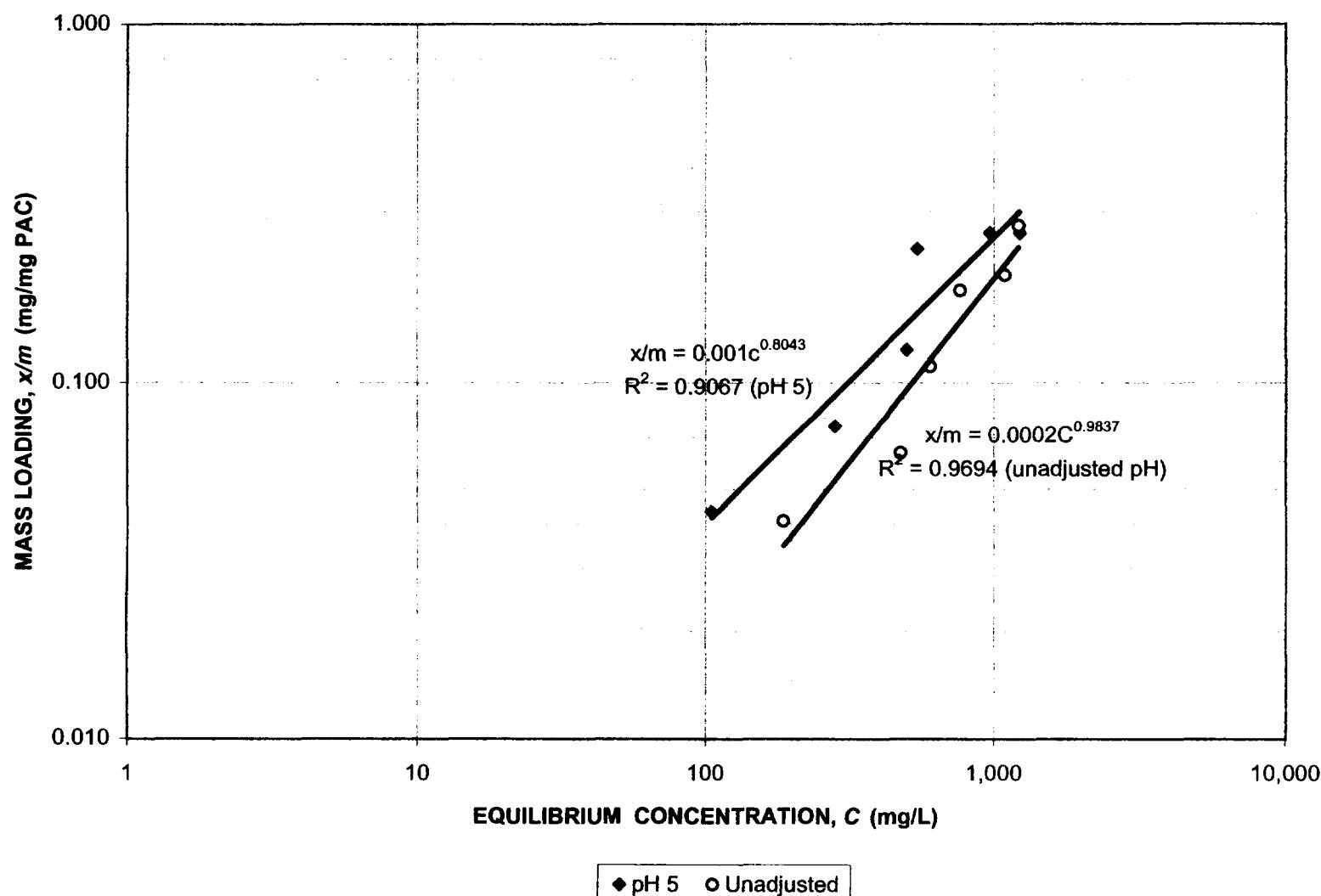


FIGURE 4-3. JAR TEST PRECIPITATION SOLIDS GENERATION DATA

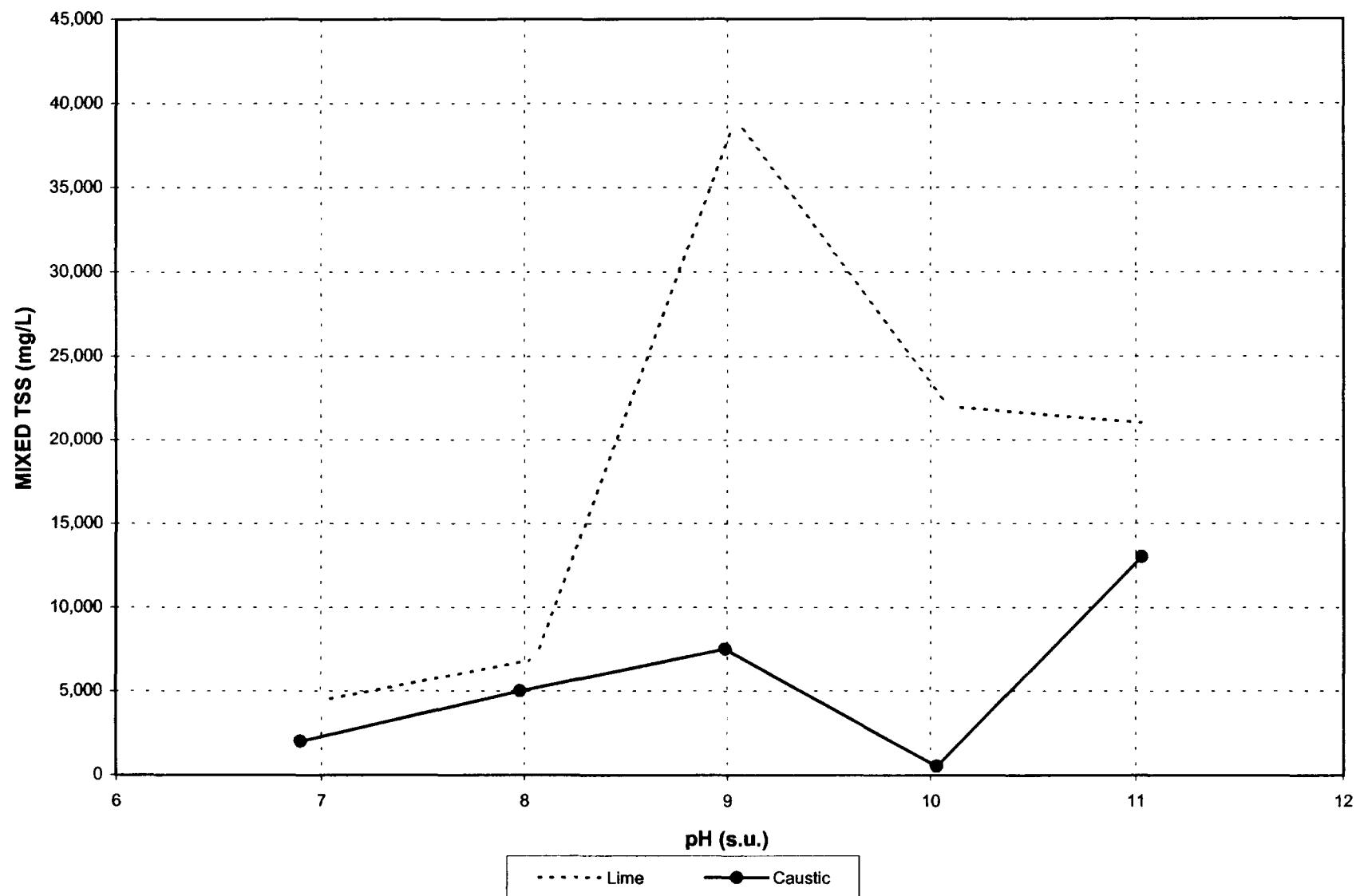


FIGURE 4-4. COD REMOVAL IN ACTIVATED SLUDGE BATCH TEST

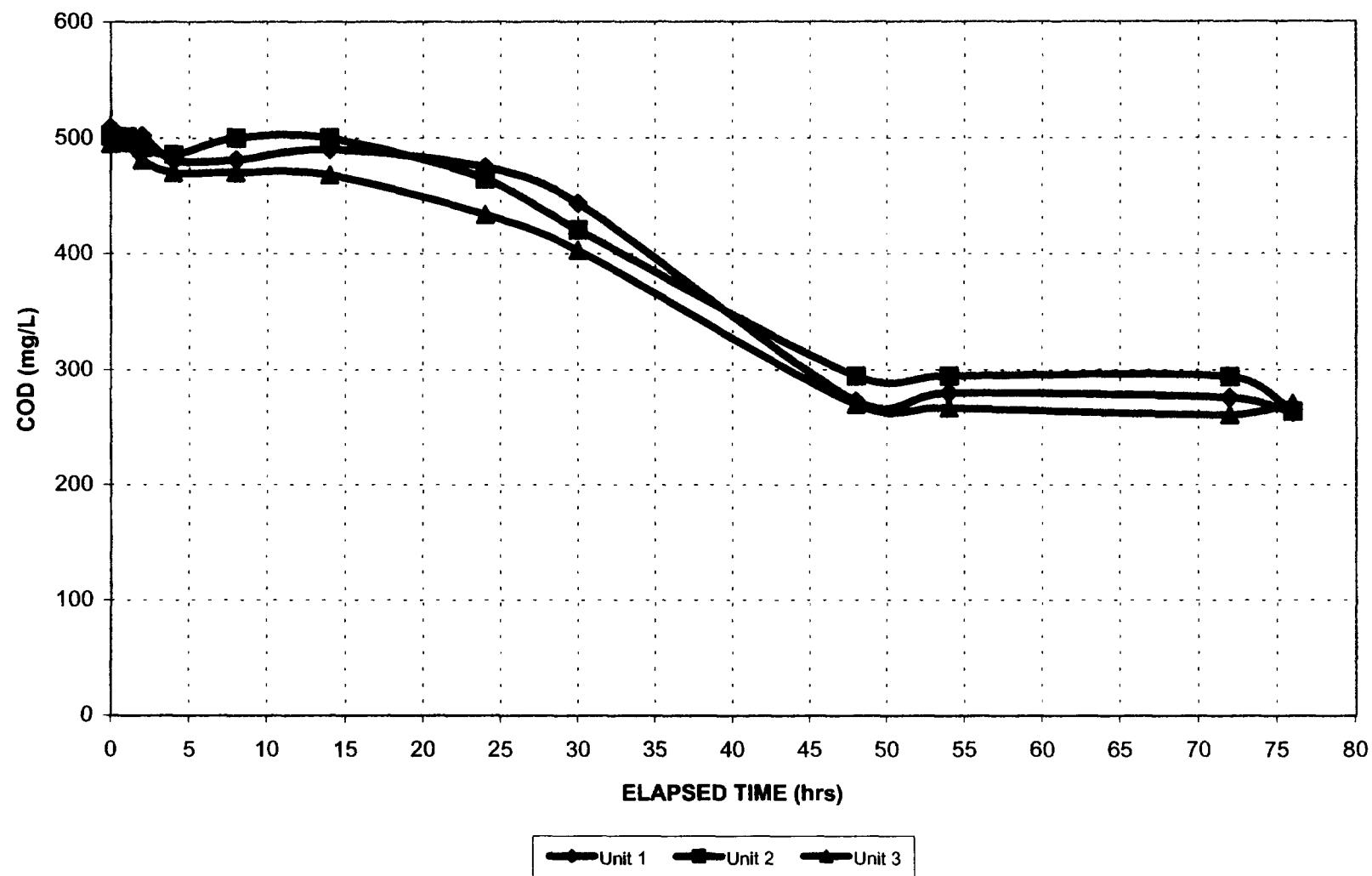


FIGURE 4-5. NH₃-N REMOVAL IN ACTIVATED SLUDGE BATCH TEST

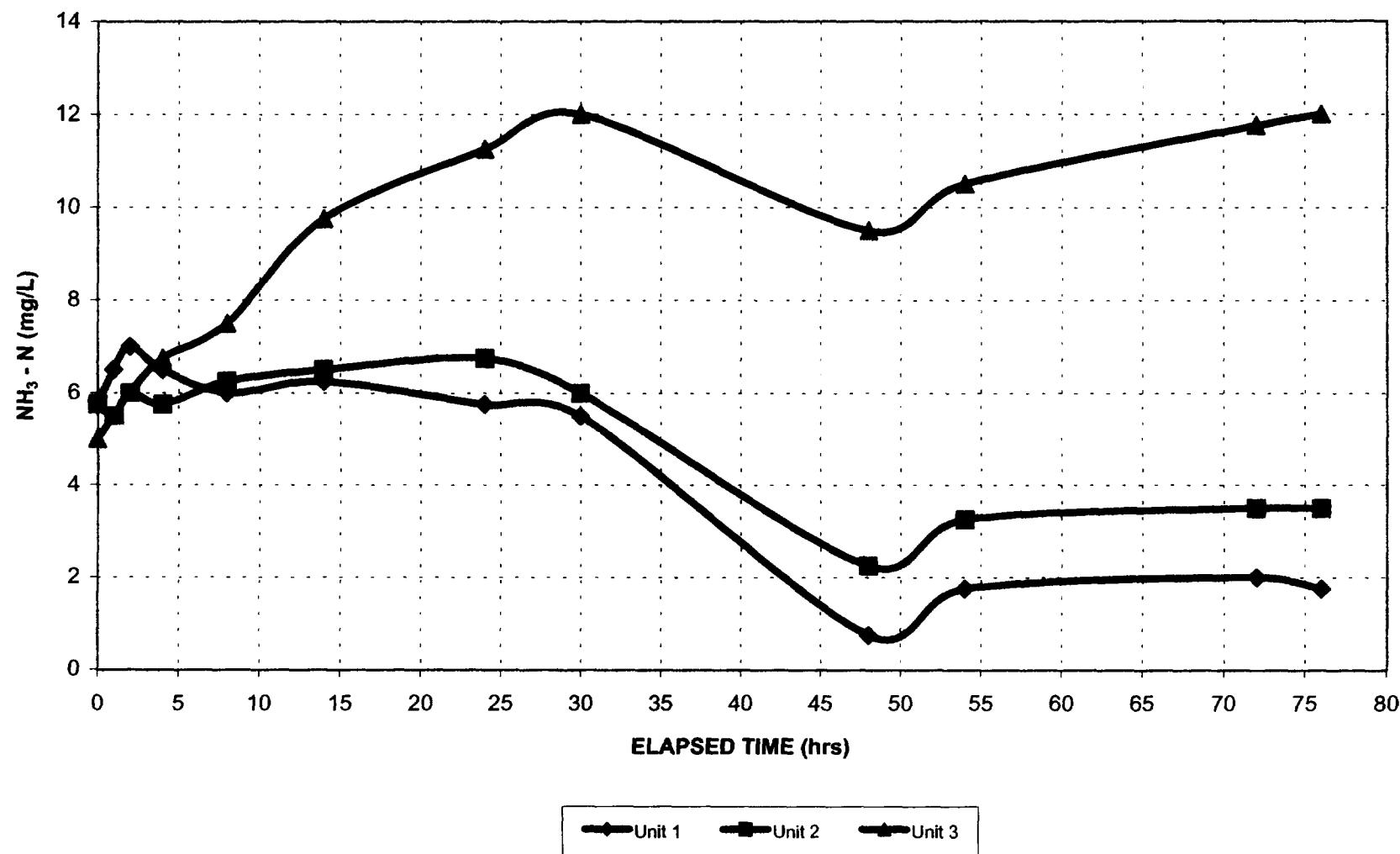


FIGURE 4-6. HYDROGEN PEROXIDE OXIDATION COD RESULTS

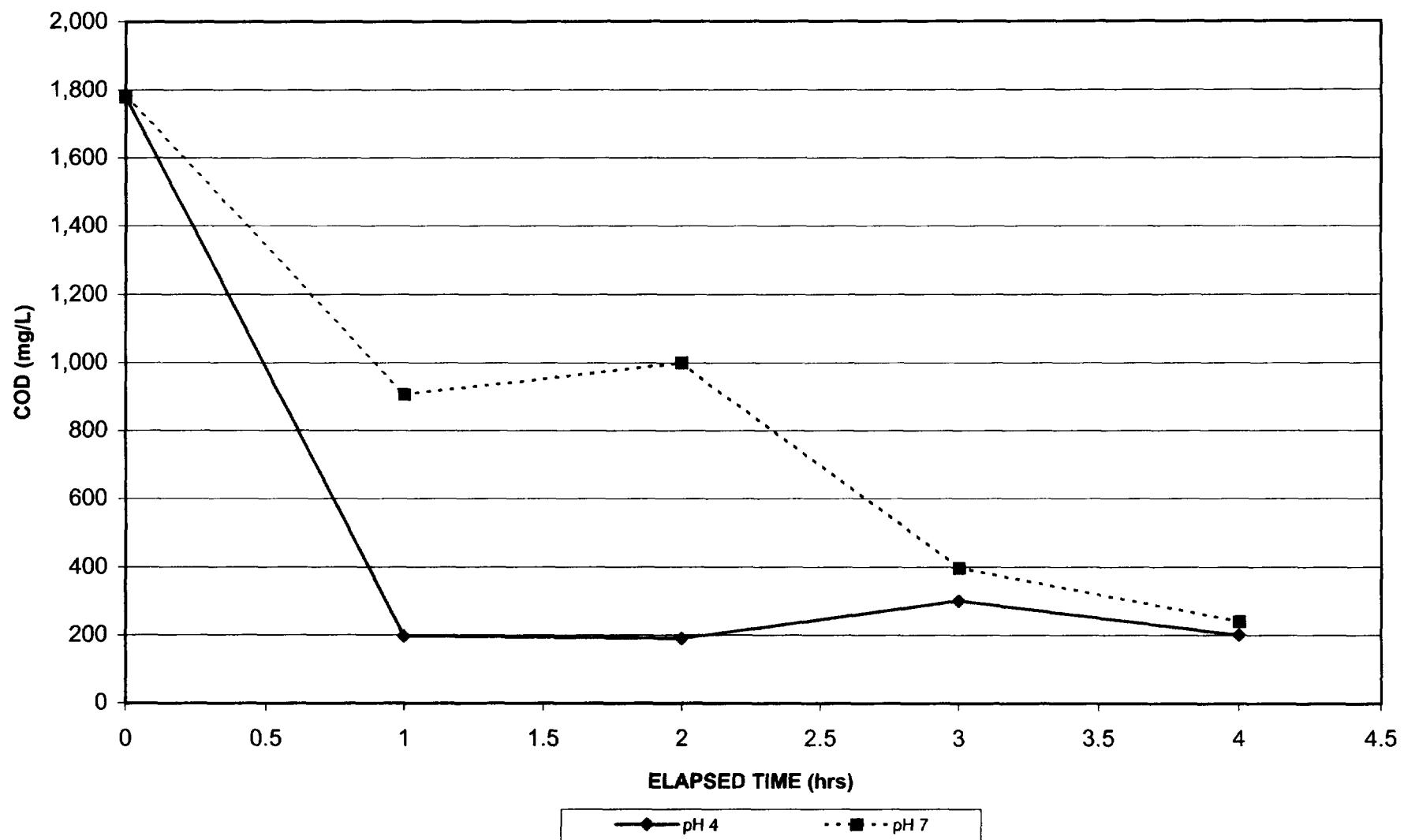


FIGURE 4-7. OZONE OXIDATION COD RESULTS

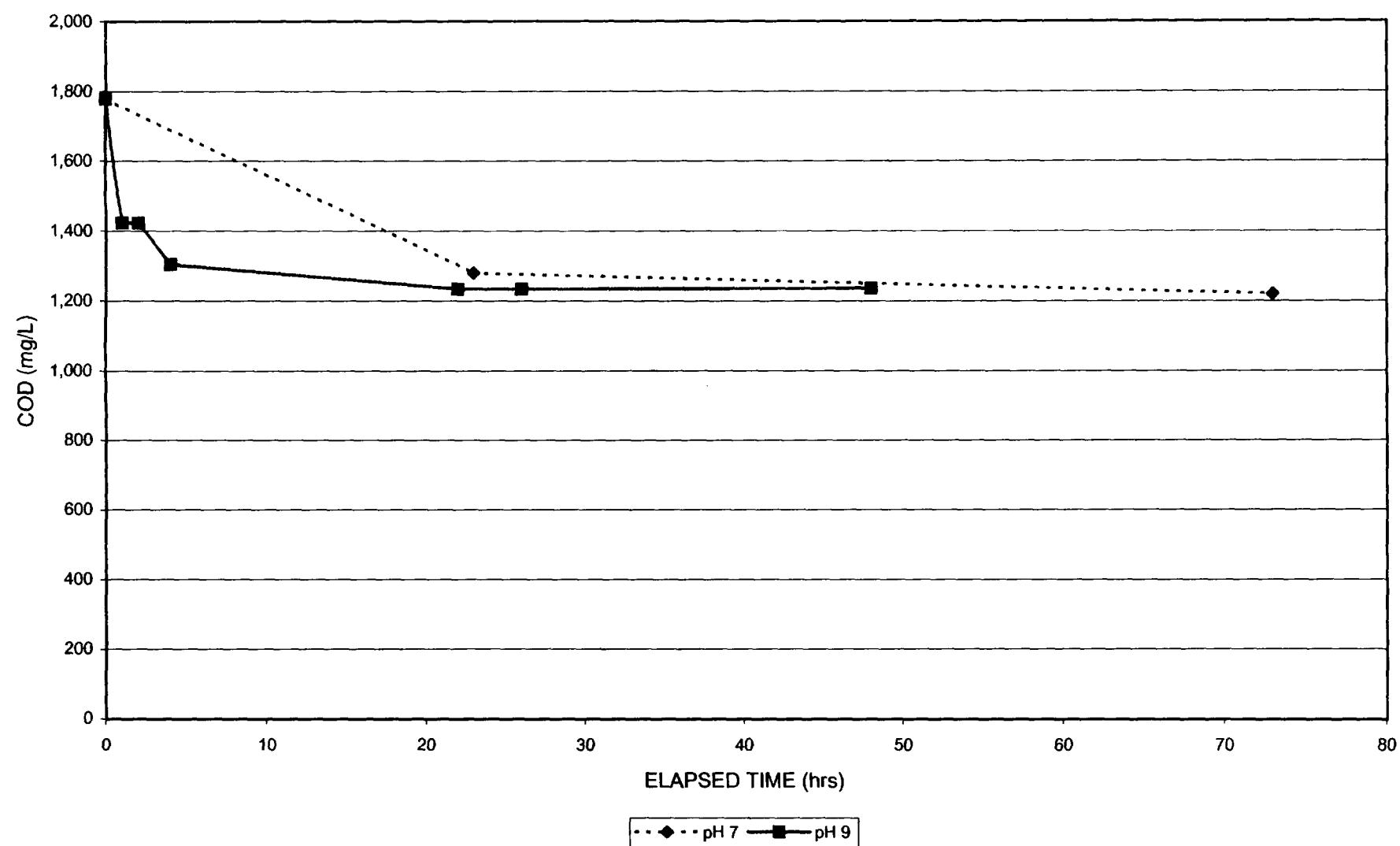
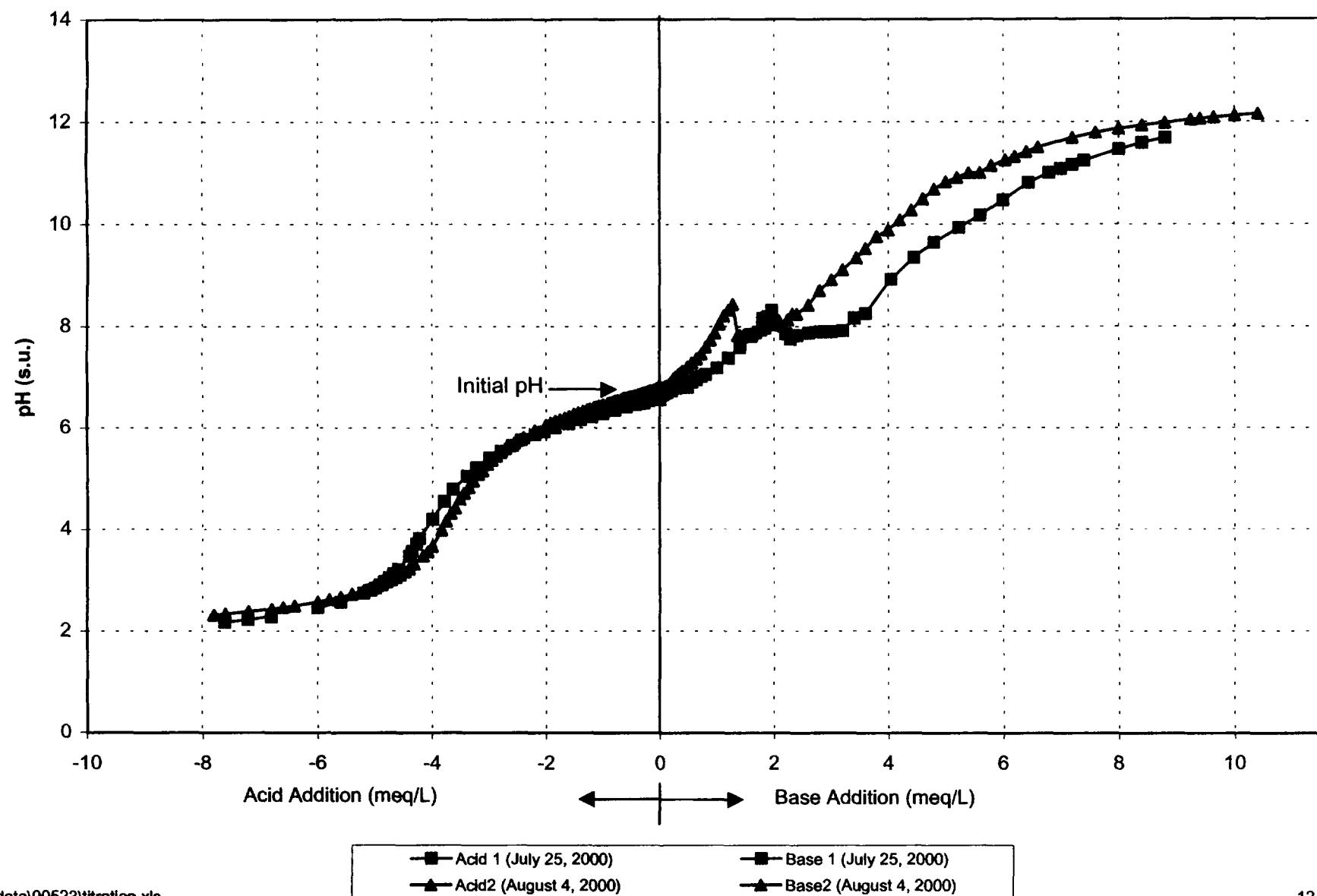


FIGURE 4-8. TITRATION CURVES FOR SAUGET AREA 1 LEACHATE



5.0 DISCUSSION OF RESULTS

5.1 ACTIVATED CARBON

A standard activated carbon adsorption system consists of two ten-foot diameter columns in series mounted on a skid. Each column has an 8-foot activated carbon bed depth. Each column contains approximately 20,000 lbs of granular activated carbon. Activated carbon adsorption columns are typically designed at a hydraulic loading rate of around 3 gpm/ft². Each lead column on a full-scale skid has a surface area of 78.5 ft². The flow for the Sauget Area 1 Leachate is unknown at this time. A system comprised of one two-column skid designed for a hydraulic loading rate of 3 gpm/ft² would have a hydraulic capacity of 236 gpm. If the leachate flow is less than this, smaller diameter columns could be used. If the leachate flow is greater than about 250 gpm, then multiple skids operated in parallel could be employed.

The TOC adsorption rate was 0.09 lbs TOC per lb activated carbon at an influent TOC of 490 mg/L. If run to complete exhaustion, the lead column would have treated 1,800 lbs of TOC. At a flow of 236 gpm and 500 mg/L TOC, this would equate to a run time of approximately 1.3 days.

If TOC were used as an indicator for organics treatment, activated carbon adsorption does not appear to be a cost-effective treatment based upon rapid time to column exhaustion. Activated carbon used as a final polishing step could be a more suitable application for this technology.

5.2 CHEMICAL PRECIPITATION

Both lime and caustic were effective at removing metals. Several metals were removed to low or less than MDL levels at a pH of 9 to 10 s.u. Aluminum, antimony, beryllium, cadmium, copper, lead, mercury, selenium, silver, thallium, vanadium, and zinc were detected at less than method detection limits.

Caustic is the preferred precipitation agent since it generated half the solids produced by lime precipitation with similar metals removal performance. Polymer addition was not necessary to achieve good effluent quality in the jar tests.

5.3 BIOLOGICAL TREATMENT

The COD results indicate that at least some of the compounds in the Sauget Area 1 leachate are biodegradable. The delayed start in COD and NH₃-N removal by the POTW sludge indicates that some degree of acclimation to the leachate might be beneficial. Activated sludge treatment of this leachate may be a viable technical option.

5.4 OXIDATION

Hydrogen peroxide with an iron catalyst removed approximately 85 to 90 percent of the COD. Treatment was more rapid at a pH of 4 s.u. Most semivolatiles were reduced to MDL levels. Approximately 1.4 liters of sludge was generated in the pH 4 s.u. sample, while 0.59 liters of sludge was generated at a pH of 7 s.u.

Ozone reduced COD concentrations by 30 percent. Oxidation appears to be a technically feasible option for treating the organics in the leachate.

5.5 FILTRATION

Filtration effectively removed PCBs and TSS from the leachate. The treatment performance was the same whether a 0.45, 1 or 10 µm filter was used.

5.6 SUMMARY

To briefly summarize, the removal of metals was most effectively accomplished with the chemical precipitation technology. Filtration was effective for PCB and TSS removal. Carbon adsorption was effective at removing a number of constituents including PCBs, herbicides, semivolatile organics (SVOC), and volatile organics (VOC), and dioxins, but the carbon will be exhausted quickly. Based on COD removal after 76 hours of treatment, activated sludge may be a viable treatment technology. Its viability will

depend on the ability of microorganisms to acclimate to chlorophenols, chloroaniline, naphthalene, and 2,4-Dichlorophenol biodegradation.

ATTACHMENT 1

**ANALYTICAL REPORTS FOR COMBINED
LEACHATE SAMPLE FROM JULY 26, 2000**





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LOG NO: S0-05021
Received: 27 JUL 00
Reported: 14 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 115500918

REPORT OF RESULTS

Page 1

DATE/

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05021-1	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate	07-26-00/12:00	SIL055

PARAMETER 05021-1 05021-1-RE 05021-1-DL

Volatiles by GC/MS (8260)

Chloromethane, ug/l	20U	---	400U
Bromomethane (Methyl bromide), ug/l	20U	---	390U
Vinyl chloride, ug/l	88	---	77DJ
Chloroethane, ug/l	20U	---	400U
Methylene chloride (Dichloromethane), ug/l	7.1JB	---	190U
Acetone, ug/l	44000E	---	6300D
Carbon disulfide, ug/l	10U	---	200U
1,1-Dichloroethene, ug/l	180	---	140DJ
1,1-Dichloroethane, ug/l	1500E	---	1800D
Cis/Trans-1,2-Dichloroethene, ug/l	4000E	---	5700D
Chloroform, ug/l	16	---	200U
1,2-Dichloroethane, ug/l	10U	---	200U
2-Butanone (MEK), ug/l	65	---	1000U
1,1,1-Trichloroethane, ug/l	3700E	---	5000D
Carbon tetrachloride, ug/l	10U	---	200U
Bromodichloromethane, ug/l	10U	---	200U
1,1,2,2-Tetrachloroethane, ug/l	10U	---	200U
1,2-Dichloropropane, ug/l	2.4J	---	200U



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Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05021-1	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate	07-26-00/12:00	SIL055
PARAMETER 05021-1 05021-1-RE 05021-1-DL			
trans-1,3-Dichloropropene, ug/l	10U	---	200U
Trichloroethene, ug/l	380	---	370D
Dibromochloromethane, ug/l	10U	---	200U
1,1,2-Trichloroethane, ug/l	17	---	200U
Benzene, ug/l	530E	---	580D
cis-1,3-Dichloropropene, ug/l	2.0U	---	40U
Bromoform, ug/l	10U	---	200U
2-Hexanone, ug/l	50U	---	1000U
4-Methyl-2-pentanone (MIBK), ug/l	840	---	620DJ
Tetrachloroethene, ug/l	25	---	200U
Toluene, ug/l	250	---	240D
Chlorobenzene, ug/l	1200E	---	1400D
Ethylbenzene, ug/l	52	---	54DJ
Styrene, ug/l	10U	---	200U
Xylenes, Total, ug/l	76	---	200U
Surrogate - Toluene-d8	100 %	---	96 %
Surrogate - 4-Bromofluorobenzene	76 %	---	90 %
Surrogate - Dibromofluoromethane	70 %	---	88 %
Dilution Factor	2	---	40
Analysis Date	08.09.00	---	08.09.00
Batch ID	1L0809	---	1L0809



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Code: 115500918

Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05021-1	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate		07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL			
Chemical Oxygen Demand (410.4), mg/l	1600			
Dilution Factor	10	---	---	
Prep Date	08.15.00	---	---	
Analysis Date	08.15.00	---	---	
Batch ID	0815A	---	---	
Total Kjeldahl Nitrogen-N (351.2), mg/l	39			
Dilution Factor	10	---	---	
Prep Date	08.07.00	---	---	
Analysis Date	08.10.00	---	---	
Batch ID	0807B	---	---	
Nitrate-N (353.2), mg/l	0.056			
Dilution Factor	1	---	---	
Prep Date	07.27.00	---	---	
Analysis Date	07.27.00	---	---	
Batch ID	0728A	---	---	



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Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 115500918

Page 4

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE /	TIME SAMPLED	SDG#
05021-1	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate		07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL			
Nitrite-N (353.2), mg/l	0.050U			
Dilution Factor	1	---	---	
Prep Date	07.27.00	---	---	
Analysis Date	07.27.00	---	---	
Batch ID	0727A	---	---	
Ortho-Phosphate-P (365.2), mg/l	0.20			
Dilution Factor	1	---	---	
Prep Date	07.28.00	---	---	
Analysis Date	07.28.00	---	---	
Batch ID	0728A	---	---	
Chloride (325.2), mg/l	610			
Dilution Factor	20	---	---	
Prep Date	08.04.00	---	---	
Analysis Date	08.04.00	---	---	
Batch ID	0804A	---	---	
Sulfate as SO ₄ (375.4), mg/l	330			
Dilution Factor	10	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.10.00	---	---	
Batch ID	0810A	---	---	



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Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 115500918

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05021-1	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate	07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL		
Total Organic Carbon (415.1), mg/l	520		
Dilution Factor	10	---	---
Prep Date	08.07.00	---	---
Analysis Date	08.08.00	---	---
Batch ID	0807C	---	---
Cyanide (335.3), mg/l	0.012		
Dilution Factor	1	---	---
Prep Date	08.02.00	---	---
Analysis Date	08.02.00	---	---
Batch ID	0802S	---	---
Aluminum (6010)			
Aluminum, mg/l	0.43	---	---
Dilution Factor	1	---	---
Prep Date	08.10.00	---	---
Analysis Date	08.22.00	---	---
Batch ID	0810L	---	---



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05021-1	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate		07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL			
Antimony (6010)				
Antimony, mg/l	0.020U	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	
Arsenic (6010)				
Arsenic, mg/l	0.011	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	
Barium (6010)				
Barium, mg/l	0.38	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	



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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05021-1	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate		07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL			
Beryllium (6010)				
Beryllium, mg/l	0.0040U	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	
Cadmium (6010)				
Cadmium, mg/l	0.0026B	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	
Calcium (6010)				
Calcium, mg/l	490	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
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05021-1-RE	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate	07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL		
Chromium (6010)			
Chromium, mg/l	0.65	---	---
Dilution Factor	1	---	---
Prep Date	08.10.00	---	---
Analysis Date	08.22.00	---	---
Batch ID	0810L	---	---
Cobalt (6010)			
Cobalt, mg/l	0.30	---	---
Dilution Factor	1	---	---
Prep Date	08.10.00	---	---
Analysis Date	08.22.00	---	---
Batch ID	0810L	---	---
Copper (6010)			
Copper, mg/l	0.0078B	---	---
Dilution Factor	1	---	---
Prep Date	08.10.00	---	---
Analysis Date	08.22.00	---	---
Batch ID	0810L	---	---



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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05021-1	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate		07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL			
Iron (6010)				
Iron, mg/l	130	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	
Potassium (6010)				
Potassium, mg/l	34	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	
Lead (6010)				
Lead, mg/l	0.070	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	



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05021-1	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate		07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL			
Magnesium (6010)				
Magnesium, mg/l	75	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	
Manganese (6010)				
Manganese, mg/l	3.3	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	
Molybdenum (6010)				
Molybdenum, mg/l	0.045	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	



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05021-1-RE	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate		07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL			
Mercury (7470)				
Mercury, mg/l	0.0013	---	---	
Dilution Factor	1	---	---	
Prep Date	08.09.00	---	---	
Analysis Date	08.10.00	---	---	
Batch ID	0809R	---	---	
Nickel (6010)				
Nickel, mg/l	0.12	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	
Selenium (6010)				
Selenium, mg/l	0.0043B	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	



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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05021-1	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate	07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL		
Silver (6010)			
Silver, mg/l	0.010U	---	---
Dilution Factor	1	---	---
Prep Date	08.10.00	---	---
Analysis Date	08.22.00	---	---
Batch ID	0810L	---	---
Sodium (6010)			
Sodium, mg/l	230	---	---
Dilution Factor	1	---	---
Prep Date	08.10.00	---	---
Analysis Date	08.22.00	---	---
Batch ID	0810L	---	---
Thallium (6010)			
Thallium, mg/l	0.010U	---	---
Dilution Factor	1	---	---
Prep Date	08.10.00	---	---
Analysis Date	08.22.00	---	---
Batch ID	0810L	---	---



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05021-1	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate		07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL			
Vanadium (6010)				
Vanadium, mg/l	0.10	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	
Zinc (6010)				
Zinc, mg/l	0.84	---	---	
Dilution Factor	1	---	---	
Prep Date	08.10.00	---	---	
Analysis Date	08.22.00	---	---	
Batch ID	0810L	---	---	



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05021-1	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate	07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL		
PCB's (8082)			
Aroclor-1016, ug/l	1.0U	1.0U	---
Aroclor-1221, ug/l	2.0U	2.0U	---
Aroclor-1232, ug/l	1.0U	1.0U	---
Aroclor-1242, ug/l	1.0U	1.0U	---
Aroclor-1248, ug/l	1.0U	1.0U	---
Aroclor-1254, ug/l	5.3	1.0U	---
Aroclor-1260, ug/l	8.2	1.0U	---
Surrogate - TCX	0 %X	0 %X	---
Surrogate - DCB	0 %X	0 %X	---
Dilution Factor	1	1	---
Prep Date	08.02.00	08.15.00	---
Analysis Date	08.14.00	08.19.00	---
Batch ID	0802Q	0815O	---



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05021-1-RE	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate	07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL		
TCL Semivolatiles (8270)			
Phenol, ug/l	4500	---	---
bis(2-Chloroethyl)ether, ug/l	250U	---	---
2-Chlorophenol, ug/l	450	---	---
1,3-Dichlorobenzene, ug/l	250U	---	---
1,4-Dichlorobenzene, ug/l	570	---	---
1,2-Dichlorobenzene, ug/l	350	---	---
2-Methylphenol (o-Cresol), ug/l	110J	---	---
2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether), ug/l	250U	---	---
3-Methylphenol/4-Methylphen ol (m&p-Cresol), ug/l	460	---	---
N-Nitroso-di-n-propylamine, ug/l	250U	---	---
Hexachloroethane, ug/l	48U	---	---
Nitrobenzene, ug/l	88U	---	---
Isophorone, ug/l	250U	---	---
2-Nitrophenol, ug/l	250U	---	---
bis(2-Chloroethoxy)methane, ug/l	250U	---	---
2,4-Dichlorophenol, ug/l	1500	---	---
1,2,4-Trichlorobenzene, ug/l	2900	---	---



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05021-1-RE	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate		07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL			
Naphthalene, ug/l	250U	---	---	
4-Chloroaniline, ug/l	7700	---	---	
Hexachlorobutadiene, ug/l	250U	---	---	
4-Chloro-3-methylphenol, ug/l	250U	---	---	
2-Methylnaphthalene, ug/l	250U	---	---	
Hexachlorocyclopentadiene, ug/l	250U	---	---	
2,4,6-Trichlorophenol, ug/l	52U	---	---	
2,4,5-Trichlorophenol, ug/l	250U	---	---	
2-Chloronaphthalene, ug/l	250U	---	---	
2-Nitroaniline, ug/l	1200U	---	---	
Dimethylphthalate, ug/l	250U	---	---	
Acenaphthylene, ug/l	250U	---	---	
3-Nitroaniline, ug/l	1200U	---	---	
Acenaphthene, ug/l	250U	---	---	
2,4-Dinitrophenol, ug/l	350U	---	---	
4-Nitrophenol, ug/l	130J	---	---	
Dibenzofuran, ug/l	250U	---	---	
2,4-Dinitrotoluene, ug/l	250U	---	---	
2,6-Dinitrotoluene, ug/l	250U	---	---	
Diethylphthalate, ug/l	42J	---	---	
4-Chlorophenylphenyl ether, ug/l	250U	---	---	



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05021-1-RE	Sauget Leachate	07-26-00/12:00	SIL055	
05021-1-DL	Sauget Leachate	07-26-00/12:00	SIL055	

PARAMETER	05021-1	05021-1-RE	05021-1-DL
-----------	---------	------------	------------

Fluorene, ug/l	25U	---	---
4-Nitroaniline, ug/l	1200U	---	---
4,6-Dinitro-2-methylphenol, ug/l	320U	---	---
N-Nitrosodiphenylamine, ug/l	120U	---	---
4-Bromophenylphenyl ether, ug/l	25U	---	---
Hexachlorobenzene, ug/l	260	---	---
Pentachlorophenol, ug/l	5200	---	---
Phenanthrene, ug/l	14J	---	---
Anthracene, ug/l	250U	---	---
Di-n-butylphthalate, ug/l	250U	---	---
Fluoranthene, ug/l	72J	---	---
Pyrene, ug/l	86J	---	---
Butylbenzylphthalate, ug/l	250U	---	---
3,3'-Dichlorobenzidine, ug/l	500U	---	---
Benzo(a)anthracene, ug/l	51J	---	---
bis(2-Ethylhexyl)phthalate, ug/l	56	---	---
Chrysene, ug/l	63J	---	---
Di-n-octylphthalate, ug/l	250U	---	---
Benzo(b)fluoranthene, ug/l	41J	---	---
Benzo(k)fluoranthene, ug/l	40J	---	---
Benzo(a)pyrene, ug/l	53J	---	---



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05021-1-RE	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate	07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL		
Indeno(1,2,3-cd)pyrene, ug/l	250U	---	---
Dibenzo(a,h)anthracene, ug/l	250U	---	---
Benzo(g,h,i)perylene, ug/l	32J	---	---
Carbazole, ug/l	85U	---	---
Surrogate - Phenol-d5	OD %	---	---
Surrogate - 2-Fluorophenol	OD %	---	---
Surrogate - 2,4,6-Tribromophenol	OD %	---	---
Surrogate - Nitrobenzene - d5	OD %	---	---
Surrogate - 2-Fluorobiphenyl	OD %	---	---
Surrogate - Terphenyl-d14	OD %	---	---
Dilution Factor	25	---	---
Prep Date	08.01.00	---	---
Analysis Date	08.14.00	---	---
Batch ID	0801D	---	---



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LOG NO: S0-05021

Received: 27 JUL 00

Reported: 14 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 115500918

Page 19

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05021-1	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate		07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL			
Chlorinated Herbicides (8151)				
2,4-D, ug/l	2200EP	---	2200D	
2,4-DB, ug/l	25U	---	1000U	
2,4,5-T, ug/l	170P	---	130DJP	
2,4,5-TP (Silvex), ug/l	25U	---	1000U	
Dalapon, ug/l	6000U	---	240000U	
Dicamba, ug/l	60U	---	2400U	
Dichloroprop, ug/l	300U	---	12000U	
Dinoseb, ug/l	300U	---	12000U	
MCPA[(4-chloro-2-methylphenoxy)-acetic acid], ug/l	6000U	---	240000U	
MCPP[2-(4-chloro-2-methylphenoxy)-propanoic acid], ug/l	11000P	---	240000U	
Pentachlorophenol, ug/l	760E	---	820DJ	
Surrogate-DCAA	0 ‰D	---	0 ‰D	
Dilution Factor	50	---	2000	
Prep Date	08.01.00	---	08.01.00	
Analysis Date	09.05.00	---	09.07.00	
Batch ID	0801P	---	0801P	



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LOG NO: S0-05021
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Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 115500918

Page 20

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE /	TIME SAMPLED	SDG#
05021-1	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate		07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL			
Total Dissolved Solids (160.1), mg/l	3100			
Dilution Factor	1	---	---	
Prep Date	07.28.00	---	---	
Analysis Date	07.31.00	---	---	
Batch ID	0728A	---	---	
Total Dissolved Inorganic Solids (2540C/E), mg/l	960			
Dilution Factor	1	---	---	
Prep Date	07.28.00	---	---	
Analysis Date	07.31.00	---	---	
Batch ID	0728A	---	---	
Suspended Solids (160.2), mg/l	260			
Dilution Factor	1	---	---	
Prep Date	07.28.00	---	---	
Analysis Date	07.31.00	---	---	
Batch ID	0728C	---	---	



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LOG NO: S0-05021
Received: 27 JUL 00
Reported: 14 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 115500918
Page 21

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05021-1	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate		07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate		07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL			
Volatile Suspended Solids (160.4), mg/l	70			
Dilution Factor	1	---	---	
Prep Date	07.28.00	---	---	
Analysis Date	08.01.00	---	---	
Batch ID	0728C	---	---	
Alkalinity (to pH 4.5) as CaCO ₃ (310.1), mg/l	770			
Dilution Factor	1	---	---	
Prep Date	07.27.00	---	---	
Analysis Date	07.27.00	---	---	
Batch ID	0727D	---	---	
Biochemical Oxygen Demand (5 Day) (405.1/5210B), mg/l	610			
Prep Date	07.27.00	---	---	
Analysis Date	07.27.00	---	---	
Batch ID	0727A	---	---	



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Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 115500918

Page 22

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05021-1	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-RE	Sauget Leachate	07-26-00/12:00	SIL055
05021-1-DL	Sauget Leachate	07-26-00/12:00	SIL055
PARAMETER	05021-1 05021-1-RE 05021-1-DL		
Specific Conductance (120.1), umhos/cm	4300		
Dilution Factor	10	---	---
Prep Date	07.28.00	---	---
Analysis Date	07.28.00	---	---
Batch ID	0728B	---	---
Color, PCU	880		
Dilution Factor	25	---	---
Prep Date	07.28.00	---	---
Analysis Date	07.28.00	---	---
Batch ID	0728B	---	---



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LOG NO: S0-05021
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Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 115500918

Page 23

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE /	TIME SAMPLED	SDG#
05021-1	Sauget Leachate	07-26-00/12:00		SIL055
05021-1-RE	Sauget Leachate	07-26-00/12:00		SIL055
05021-1-DL	Sauget Leachate	07-26-00/12:00		SIL055

PARAMETER 05021-1 05021-1-RE 05021-1-DL

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III.

X = Surrogate recoveries were outside established limits; therefore, the sample was re-extracted and reanalyzed. Comparable results were obtained.

J = The flag "J" indicates the presence of a compound that meets the identification criteria, but the result is less than the sample RL and greater than the MDL.

B (Inorganic) = This flag indicates the reported value was obtained from a reading that was less than the Project Reporting Limits but greater than or equal to the Method Detection Limit (MDL).

U = Analyzed for but not detected.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.

B (Organic) = This flag is used when the analyte is found in the associated method blank as well as in the sample.

This flag indicates the reported value is estimated because of the



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Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 115500918
Page 24

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05021-1	Sauget Leachate	07-26-00/12:00		SIL055
05021-1-RE	Sauget Leachate	07-26-00/12:00		SIL055
05021-1-DL	Sauget Leachate	07-26-00/12:00		SIL055

PARAMETER 05021-1 05021-1-RE 05021-1-DL

presence of interference.

E (Organic) = Result exceeded the upper calibration limit.

D = Result is from a secondary dilution.

Angie Stewart, Project Manager



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Serial Number:

U25/5

PROJECT NUMBER <i>Leachate Treatability</i>		PROJECT NO 00533	PROJECT LOCATION (STATE) TN	MATRIX TYPE	REQUIRED ANALYSES						PAGE 1	OF 1												
P.O. NUMBER		CONTRACT NO:									STANDARD REPORT DELIVERY													
CLIENT PHONE <i>Pat Campbell</i>		CLIENT FAX 615-317-4775	CLIENT FAX 615-317-4976								DATE DUE													
CLIENT EMAIL <i>The Advent Group</i>		J.BALTZ@adventgroup.org									EXPEDITED REPORT DELIVERY (SURCHARGE)													
CLIENT ADDRESS <i>201 Summit View Dr. Brentwood, TN 37027</i>											DATE DUE													
COMMENTS/CONTRACTING THIS WORK (if applicable)																								
SAMPLE		SAMPLE IDENTIFICATION		COMPOSITE (G) OR GRANULE (G) / AQUEOUS (WATER)	SOLID OR SEMI-SOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC.)	BOD	color	ALK/SC	TDS/TDS	SS/YS	PCB/soil/herb	Dioxin - 8240	Metals / mercury	Cyanide	TOC	NO ₃ /NO ₂ /PO ₄	Cl/SO ₄	COD/TKN	VOC	NUMBER OF CONTAINERS SUBMITTED		REMARKS
DATE 7/26	TIME 12:00pm	Sauger Leachate		X																			1 1 6 2 1 1 1 1 1 3	
RELINQUISHED BY: (SIGNATURE) <i>Swafford</i>		DATE 7/26/00	TIME	RELINQUISHED BY: (SIGNATURE) <i>Jason Bally</i>		DATE 7/26/00	TIME 5:00pm	RELINQUISHED BY: (SIGNATURE)		DATE	TIME													
RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME													

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL-SL LOG NO.	LABORATORY REMARKS:
K Conner	7/27/00	9:15	YES 60		50 - 05021	



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LOG NO: S0-05204
Received: 03 AUG 00
Reported: 27 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 104400928

REPORT OF RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05204-17	RAW LEACHATE - FILTERED		08-01-00/12:00	SIL057
PARAMETER		05204-17		
Mercury (7470), mg/l	0.00063			
Dilution Factor	1			
Prep Date	08.11.00			
Analysis Date	08.12.00			
Batch ID	0811V			
Arsenic (6010)				
Arsenic, mg/l	0.0061B			
Dilution Factor	1			
Prep Date	08.17.00			
Analysis Date	08.22.00			
Batch ID	0817I			
Aluminum (6010)				
Aluminum, mg/l	0.20U			
Dilution Factor	1			
Prep Date	08.17.00			
Analysis Date	08.22.00			
Batch ID	0817I			
Antimony (6010)				
Antimony, mg/l	0.020U			
Dilution Factor	1			
Prep Date	08.17.00			
Analysis Date	08.22.00			
Batch ID	0817I			



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Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 104400928

Page 6

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05204-17	RAW LEACHATE - FILTERED		08-01-00/12:00	SIL057
PARAMETER		05204-17		
Barium (6010)				
Barium, mg/l		0.16		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		
Beryllium (6010)				
Beryllium, mg/l		0.0040U		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		
Cadmium (6010)				
Cadmium, mg/l		0.0033B		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		



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Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

LOG NO: S0-05204
Received: 03 AUG 00
Reported: 27 SEP 00

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 104400928

REPORT OF RESULTS

Page 7

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05204-17	RAW LEACHATE - FILTERED		08-01-00/12:00	SIL057
<hr/>				
PARAMETER				
		05204-17		
<hr/>				
Calcium (6010)				
Calcium, mg/l		480		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		
<hr/>				
Chromium (6010)				
Chromium, mg/l		0.27		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		
<hr/>				
Cobalt (6010)				
Cobalt, mg/l		0.28		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		
<hr/>				



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Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 104400928

Page 8

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05204-17	RAW LEACHATE - FILTERED		08-01-00/12:00	SIL057
PARAMETER		05204-17		
Copper (6010)				
Copper, mg/l		0.0014B		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		
Iron (6010)				
Iron, mg/l		64		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		
Potassium (6010)				
Potassium, mg/l		33		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		



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201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 104400928

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05204-17	RAW LEACHATE - FILTERED		08-01-00/12:00	SIL057
PARAMETER		05204-17		
Lead (6010)				
Lead, mg/l		0.0050U		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		
Magnesium (6010)				
Magnesium, mg/l		74		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		
Manganese (6010)				
Manganese, mg/l		3.2		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		



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Advent Group
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Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 104400928

Page 10

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05204-17	RAW LEACHATE - FILTERED		08-01-00/12:00	SIL057
PARAMETER			05204-17	
Molybdenum (6010)				
Molybdenum, mg/l	0.036			
Dilution Factor	1			
Prep Date	08.17.00			
Analysis Date	08.22.00			
Batch ID	0817I			
Nickel (6010)				
Nickel, mg/l	0.067			
Dilution Factor	1			
Prep Date	08.17.00			
Analysis Date	08.22.00			
Batch ID	0817I			
Selenium (6010)				
Selenium, mg/l	0.010U			
Dilution Factor	1			
Prep Date	08.17.00			
Analysis Date	08.22.00			
Batch ID	0817I			



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Mr. Pat Campbell
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201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 104400928

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05204-17	RAW LEACHATE - FILTERED		08-01-00/12:00	SIL057
PARAMETER		05204-17		
Silver (6010)				
Silver, mg/l		0.010U		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		
Sodium (6010)				
Sodium, mg/l		220		
Dilution Factor		10		
Prep Date		08.17.00		
Analysis Date		08.25.00		
Batch ID		0817I		
Thallium (6010)				
Thallium, mg/l		0.010U		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		



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Client PO. No.: 4503148706

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Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 104400928

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05204-17	RAW LEACHATE - FILTERED		08-01-00/12:00	SIL057
PARAMETER		05204-17		
Vanadium (6010)				
Vanadium, mg/l		0.0066B		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		
Zinc (6010)				
Zinc, mg/l		0.64		
Dilution Factor		1		
Prep Date		08.17.00		
Analysis Date		08.22.00		
Batch ID		0817I		

U = Analyzed for but not detected.

B (Inorganic) = This flag indicates the reported value was obtained from a reading that was less than the Project Reporting Limits but greater than or equal to the Method Detection Limit (MDL).

Angie Stewart, Project Manager

ATTACHMENT 2

**ANALYTICAL REPORTS FOR SITE I
AND G SAMPLES ON APRIL 25 AND 26, 2000**



SEVERN

TRENT

SERVICES

STL Savannah

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LOG NO: S0-02705

Received: 27 APR 00

Reported: 06 JUN 00

Ms. Karen Storne
 O'Brien & Gere Engineers
 5000 Brittonfield Parkway
 E. Syracuse, NY 13057

Client PO. No.: 4503148706

Requisition: VEN#203708

Contract No.: S7219

Project: 23548/Sauget Area 1

Sampled By: Client

Code: 102301025

Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE /	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00		SIL053
02705-1-RE	Leach-I-1	04-25-00/15:00		SIL053
02705-1-DL	Leach-I-1	04-25-00/15:00		SIL053
02705-2	Leach-G-1		04-26-00	SIL053
02705-2-RE	Leach-G-1		04-26-00	SIL053
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2 02705-2-RE		
Aluminum (6010)				
Aluminum, mg/l	3.3	---	0.12B	---
Dilution Factor	1	---	1	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.02.00	---	05.02.00	---
Analysis Time	10:25	---	10:29	---
Batch ID	0501H	---	0501H	---
Instrument ID	ICPD	---	ICPD	---
Antimony (6010)				
Antimony, mg/l	0.020U	---	0.0060B	---
Dilution Factor	1	---	1	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.02.00	---	05.02.00	---
Analysis Time	10:25	---	10:29	---
Batch ID	0501H	---	0501H	---
Instrument ID	ICPD	---	ICPD	---

LOG NO: S0-02705
Received: 27 APR 00
Reported: 06 JUN 00

Ms. Karen Storne
O'Brien & Gere Engineers
5000 Brittonfield Parkway
E. Syracuse, NY 13057

Client PO. No.: 4503148706

Requisition: VEN#203708
Contract No.: S7219
Project: 23548/Sauget Area 1
Sampled By: Client
Code: 102301025

Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053	
02705-2	Leach-G-1	04-26-00	SIL053	
02705-2-RE	Leach-G-1	04-26-00	SIL053	
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2 02705-2-RE		
Arsenic (6010)				
Arsenic, mg/l	0.031	---	0.019	---
Dilution Factor	1	---	1	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.02.00	---	05.02.00	---
Analysis Time	10:25	---	10:29	---
Batch ID	0501H	---	0501H	---
Instrument ID	ICPD	---	ICPD	---
Barium (6010)				
Barium, mg/l	1.0	---	0.73	---
Dilution Factor	1	---	1	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.02.00	---	05.02.00	---
Analysis Time	10:25	---	10:29	---
Batch ID	0501H	---	0501H	---
Instrument ID	ICPD	---	ICPD	---

LOG NO: S0-02705

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5000 Brittonfield Parkway
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Client PO. No.: 4503148706

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Contract No.: S7219

Project: 23548/Sauget Area 1

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00	SIL053
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053
02705-2	Leach-G-1	04-26-00	SIL053
02705-2-RE	Leach-G-1	04-26-00	SIL053
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2 02705-2-RE	
Beryllium (6010)			
Beryllium, mg/l	0.0040U	---	0.0040U
Dilution Factor	1	---	1
Prep Date	05.01.00	---	05.01.00
Analysis Date	05.02.00	---	05.02.00
Analysis Time	10:25	---	10:29
Batch ID	0501H	---	0501H
Instrument ID	ICPD	---	ICPD
Cadmium (6010)			
Cadmium, mg/l	0.0050U	---	0.0038B
Dilution Factor	1	---	1
Prep Date	05.01.00	---	05.01.00
Analysis Date	05.02.00	---	05.02.00
Analysis Time	10:25	---	10:29
Batch ID	0501H	---	0501H
Instrument ID	ICPD	---	ICPD

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DATE/

TIME SAMPLED SDG#

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES			
02705-1	Leach-I-1			04-25-00/15:00 SIL053
02705-1-RE	Leach-I-1			04-25-00/15:00 SIL053
02705-1-DL	Leach-I-1			04-25-00/15:00 SIL053
02705-2	Leach-G-1			04-26-00 SIL053
02705-2-RE	Leach-G-1			04-26-00 SIL053

PARAMETER	02705-1	02705-1-RE	02705-1-DL	02705-2	02705-2-RE
-----------	---------	------------	------------	---------	------------

Calcium (6010)

Calcium, mg/l	83	---	---	720	---
Dilution Factor	1	---	---	1	---
Prep Date	05.01.00	---	---	05.01.00	---
Analysis Date	05.02.00	---	---	05.02.00	---
Analysis Time	10:25	---	---	10:29	---
Batch ID	0501H	---	---	0501H	---
Instrument ID	ICPD	---	---	ICPD	---

Chromium (6010)

Chromium, mg/l	0.055	---	---	0.61	---
Dilution Factor	1	---	---	1	---
Prep Date	05.01.00	---	---	05.01.00	---
Analysis Date	05.02.00	---	---	05.02.00	---
Analysis Time	10:25	---	---	10:29	---
Batch ID	0501H	---	---	0501H	---
Instrument ID	ICPD	---	---	ICPD	---

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02705-1	Leach-I-1	04-25-00/15:00	SIL053
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053
02705-2	Leach-G-1	04-26-00	SIL053
02705-2-RE	Leach-G-1	04-26-00	SIL053
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2 02705-2-RE	
Cobalt (6010)			
Cobalt, mg/l	0.020	---	1.4
Dilution Factor	1	---	1
Prep Date	05.01.00	---	05.01.00
Analysis Date	05.02.00	---	05.02.00
Analysis Time	10:25	---	10:29
Batch ID	0501H	---	0501H
Instrument ID	ICPD	---	ICPD
Copper (6010)			
Copper, mg/l	0.047	---	0.0036B
Dilution Factor	1	---	1
Prep Date	05.01.00	---	05.01.00
Analysis Date	05.02.00	---	05.02.00
Analysis Time	10:25	---	10:29
Batch ID	0501H	---	0501H
Instrument ID	ICPD	---	ICPD

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00	SIL053
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053
02705-2	Leach-G-1	04-26-00	SIL053
02705-2-RE	Leach-G-1	04-26-00	SIL053
PARAMETER	02705-1 02705-1-RE 02705-1-DL 02705-2 02705-2-RE		
Iron (6010)			
Iron, mg/l	23	---	280
Dilution Factor	1	---	1
Prep Date	05.01.00	---	05.01.00
Analysis Date	05.02.00	---	05.02.00
Analysis Time	10:25	---	10:29
Batch ID	0501H	---	0501H
Instrument ID	ICPD	---	ICPD
Potassium (6010)			
Potassium, mg/l	8.4E	---	28E
Dilution Factor	1	---	5
Prep Date	05.01.00	---	05.01.00
Analysis Date	05.02.00	---	05.03.00
Analysis Time	10:25	---	13:23
Batch ID	0501H	---	0501H
Instrument ID	ICPD	---	ICPD

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053	
02705-2	Leach-G-1	04-26-00	SIL053	
02705-2-RE	Leach-G-1	04-26-00	SIL053	
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2 02705-2-RE		
Lead (6010)				
Lead, mg/l	0.58	---	0.0033B	---
Dilution Factor	1	---	1	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.02.00	---	05.02.00	---
Analysis Time	10:25	---	10:29	---
Batch ID	0501H	---	0501H	---
Instrument ID	ICPD	---	ICPD	---
Magnesium (6010)				
Magnesium, mg/l	18	---	77	---
Dilution Factor	1	---	1	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.02.00	---	05.02.00	---
Analysis Time	10:25	---	10:29	---
Batch ID	0501H	---	0501H	---
Instrument ID	ICPD	---	ICPD	---

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053	
02705-2	Leach-G-1	04-26-00	SIL053	
02705-2-RE	Leach-G-1	04-26-00	SIL053	
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2 02705-2-RE		
Manganese (6010)				
Manganese, mg/l	0.71	---	4.9	---
Dilution Factor	1	---	1	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.02.00	---	05.02.00	---
Analysis Time	10:25	---	10:29	---
Batch ID	0501H	---	0501H	---
Instrument ID	ICPD	---	ICPD	---
Molybdenum (6010)				
Molybdenum, mg/l	0.0045B	---	0.099	---
Dilution Factor	1	---	1	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.02.00	---	05.02.00	---
Analysis Time	10:25	---	10:29	---
Batch ID	0501H	---	0501H	---
Instrument ID	ICPD	---	ICPD	---

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE /	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053	
02705-2	Leach-G-1	04-26-00	SIL053	
02705-2-RE	Leach-G-1	04-26-00	SIL053	
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2 02705-2-RE		
Nickel (6010)				
Nickel, mg/l	1.3	---	0.019B	---
Dilution Factor	1	---	1	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.02.00	---	05.02.00	---
Analysis Time	10:25	---	10:29	---
Batch ID	0501H	---	0501H	---
Instrument ID	ICPD	---	ICPD	---
Selenium (6010)				
Selenium, mg/l	0.010U	---	0.0074B	---
Dilution Factor	1	---	1	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.02.00	---	05.02.00	---
Analysis Time	10:25	---	10:29	---
Batch ID	0501H	---	0501H	---
Instrument ID	ICPD	---	ICPD	---

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053	
02705-2	Leach-G-1	04-26-00	SIL053	
02705-2-RE	Leach-G-1	04-26-00	SIL053	
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2 02705-2-RE		
Silver (6010)				
Silver, mg/l	0.010U	---	0.010U	---
Dilution Factor	1	---	1	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.02.00	---	05.02.00	---
Analysis Time	10:25	---	10:29	---
Batch ID	0501H	---	0501H	---
Instrument ID	ICPD	---	ICPD	---
Sodium (6010)				
Sodium, mg/l	63	---	210	---
Dilution Factor	5	---	10	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.03.00	---	05.03.00	---
Analysis Time	13:11	---	13:23	---
Batch ID	0501H	---	0501H	---
Instrument ID	ICPD	---	ICPD	---

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053	
02705-2	Leach-G-1	04-26-00	SIL053	
02705-2-RE	Leach-G-1	04-26-00	SIL053	
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2 02705-2-RE		
Thallium (6010)				
Thallium, mg/l	0.010U	---	0.010U	---
Dilution Factor	1	---	1	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.02.00	---	05.02.00	---
Analysis Time	10:25	---	10:29	---
Batch ID	0501H	---	0501H	---
Instrument ID	ICPD	---	ICPD	---
Tin (6010)				
Tin, mg/l	0.012B	---	0.016B	---
Dilution Factor	1	---	1	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.02.00	---	05.02.00	---
Analysis Time	10:25	---	10:29	---
Batch ID	0501H	---	0501H	---
Instrument ID	ICPD	---	ICPD	---

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053	
02705-2	Leach-G-1	04-26-00	SIL053	
02705-2-RE	Leach-G-1	04-26-00	SIL053	
PARAMETER	02705-1	02705-1-RE	02705-1-DL	02705-2
Vanadium (6010)				02705-2-RE
Vanadium, mg/l	0.048	---	---	0.62
Dilution Factor	1	---	---	1
Prep Date	05.01.00	---	---	05.01.00
Analysis Date	05.02.00	---	---	05.02.00
Analysis Time	10:25	---	---	10:29
Batch ID	0501H	---	---	0501H
Instrument ID	ICPD	---	---	ICPD
Zinc (6010)				
Zinc, mg/l	0.35	---	---	1.8
Dilution Factor	1	---	---	1
Prep Date	05.01.00	---	---	05.01.00
Analysis Date	05.02.00	---	---	05.02.00
Analysis Time	10:25	---	---	10:29
Batch ID	0501H	---	---	0501H
Instrument ID	ICPD	---	---	ICPD

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02705-1	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053	
02705-2	Leach-G-1	04-26-00	SIL053	
02705-2-RE	Leach-G-1	04-26-00	SIL053	
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2 02705-2-RE		
Mercury (7470)				
Mercury, mg/l	0.018S	---	0.00020U	---
Dilution Factor	5	---	1	---
Prep Date	05.01.00	---	05.01.00	---
Analysis Date	05.05.00	---	05.05.00	---
Analysis Time	17:15	---	17:24	---
Batch ID	0501R	---	0501R	---
Instrument ID	PS200	---	PS200	---

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES		DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1		04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1		04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1		04-25-00/15:00	SIL053	
02705-2	Leach-G-1		04-26-00	SIL053	
02705-2-RE	Leach-G-1		04-26-00	SIL053	
PARAMETER	02705-1 02705-1-RE 02705-1-DL		02705-2 02705-2-RE		
TCL Semivolatiles (8270)					
Phenol, ug/l	6700	5400	---	16000	11000
bis(2-Chloroethyl)ether, ug/l	330U	250U	---	1000U	1000U
2-Chlorophenol, ug/l	460	350	---	1100	850J
1,3-Dichlorobenzene, ug/l	330U	250U	---	1000U	1000U
1,4-Dichlorobenzene, ug/l	990	770	---	220J	170J
1,2-Dichlorobenzene, ug/l	560	420	---	280J	220J
2-Methylphenol (o-Cresol), ug/l	210J	250U	---	200J	110J
2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether), ug/l	330U	250U	---	1000U	1000U
3-Methylphenol/4-Methylphen ol (m&p-Cresol), ug/l	630	590	---	1400	880J
N-Nitroso-di-n-propylamine, ug/l	330U	250U	---	1000U	1000U
Hexachloroethane, ug/l	63U	48U	---	190U	190U
Nitrobenzene, ug/l	120U	88U	---	350U	350U
Isophorone, ug/l	330U	250U	---	1000U	1000U
2-Nitrophenol, ug/l	330U	250U	---	1000U	1000U
bis(2-Chloroethoxy)methane, ug/l	330U	250U	---	1000U	1000U

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1		04-25-00/15:00	SIL053
02705-1-RE	Leach-I-1		04-25-00/15:00	SIL053
02705-1-DL	Leach-I-1		04-25-00/15:00	SIL053
02705-2	Leach-G-1		04-26-00	SIL053
02705-2-RE	Leach-G-1		04-26-00	SIL053

PARAMETER	02705-1	02705-1-RE	02705-1-DL	02705-2	02705-2-RE
2,4-Dichlorophenol, ug/l	2600	2200	---	1000U	1000U
1,2,4-Trichlorobenzene, ug/l	3200	2400	---	44J	1000U
Naphthalene, ug/l	2500	1800	---	1000	4500
4-Chloroaniline, ug/l	670U	7200	---	2000U	3500
Hexachlorobutadiene, ug/l	330U	250U	---	1000U	1000U
4-Chloro-3-methylphenol, ug/l	330U	250U	---	1000U	1000U
2-Methylnaphthalene, ug/l	330U	250U	---	1000U	1000U
Hexachlorocyclopentadiene, ug/l	330U	250U	---	1000U	1000U
2,4,6-Trichlorophenol, ug/l	1300	52U	---	210U	210U
2,4,5-Trichlorophenol, ug/l	330U	250U	---	1000U	1000U
2-Chloronaphthalene, ug/l	330U	250U	---	1000U	1000U
2-Nitroaniline, ug/l	1700U	1200U	---	5000U	5000U
Dimethylphthalate, ug/l	330U	250U	---	1000U	1000U
Acenaphthylene, ug/l	330U	250U	---	1000U	1000U
3-Nitroaniline, ug/l	1700U	1200U	---	5000U	5000U
Acenaphthene, ug/l	330U	250U	---	1000U	1000U
2,4-Dinitrophenol, ug/l	470U	350U	---	1400U	1400U
4-Nitrophenol, ug/l	1700U	1200U	---	5000U	5000U
Dibenzofuran, ug/l	330U	250U	---	1000U	1000U

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LOG NO: SO-02705

Received: 27 APR 00

Reported: 06 JUN 00

Ms. Karen Storne
 O'Brien & Gere Engineers
 5000 Brittonfield Parkway
 E. Syracuse, NY 13057

Client PO. No.: 4503148706

Requisition: VEN#203708

Contract No.: S7219

Project: 23548/Sauget Area 1

Sampled By: Client

Code: 102301025

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES			DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1			04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1			04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1			04-25-00/15:00	SIL053	
02705-2	Leach-G-1			04-26-00	SIL053	
02705-2-RE	Leach-G-1			04-26-00	SIL053	
PARAMETER	02705-1	02705-1-RE	02705-1-DL	02705-2	02705-2-RE	
2,4-Dinitrotoluene, ug/l	330U	250U	---	1000U	1000U	
2,6-Dinitrotoluene, ug/l	330U	250U	---	1000U	1000U	
Diethylphthalate, ug/l	330U	53J	---	1000U	1000U	
4-Chlorophenylphenyl ether, ug/l	330U	250U	---	1000U	1000U	
Fluorene, ug/l	33U	25U	---	100U	100U	
4-Nitroaniline, ug/l	1700U	1200U	---	5000U	5000U	
4,6-Dinitro-2-methylphenol, ug/l	430U	320U	---	1300U	1300U	
N-Nitrosodiphenylamine, ug/l	170U	120U	---	500U	500U	
4-Bromophenylphenyl ether, ug/l	33U	25U	---	100U	100U	
Hexachlorobenzene, ug/l	330U	130J	---	1000U	1000U	
Pentachlorophenol, ug/l	6300	4800	---	7600	6800	
Phenanthrene, ug/l	330U	250U	---	1000U	1000U	
Anthracene, ug/l	330U	250U	---	1000U	1000U	
Di-n-butylphthalate, ug/l	330U	250U	---	1000U	1000U	
Fluoranthene, ug/l	330U	250U	---	1000U	1000U	
Pyrene, ug/l	330U	250U	---	1000U	1000U	
Butylbenzylphthalate, ug/l	330U	250U	---	1000U	1000U	
3,3'-Dichlorobenzidine, ug/l	670U	500U	---	2000U	2000U	
Benzo(a)anthracene, ug/l	22JB	250U	---	1000U	1000U	

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES			DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1			04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1			04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1			04-25-00/15:00	SIL053	
02705-2	Leach-G-1			04-26-00	SIL053	
02705-2-RE	Leach-G-1			04-26-00	SIL053	
PARAMETER	02705-1	02705-1-RE	02705-1-DL	02705-2	02705-2-RE	
bis(2-Ethylhexyl)phthalate, ug/l	30JB	45U	---	180U	180U	
Chrysene, ug/l	23JB	250U	---	1000U	1000U	
Di-n-octylphthalate, ug/l	330U	250U	---	1000U	1000U	
Benzo(b)fluoranthene, ug/l	330U	250U	---	1000U	1000U	
Benzo(k)fluoranthene, ug/l	330U	250U	---	1000U	1000U	
Benzo(a)pyrene, ug/l	330U	250U	---	1000U	1000U	
Indeno(1,2,3-cd)pyrene, ug/l	330U	250U	---	1000U	1000U	
Dibenzo(a,h)anthracene, ug/l	330U	250U	---	1000U	1000U	
Benzo(g,h,i)perylene, ug/l	330U	250U	---	1000U	1000U	
Carbazole, ug/l	110U	85U	---	340U	340U	
Surrogate - Phenol-d5	OD %	OD %	---	OD %	OD %	
Surrogate - 2-Fluorophenol	OD %	OD %	---	OD %	OD %	
Surrogate - 2,4,6-Tribromophenol	OD %	OD %	---	OD %	OD %	
Surrogate - Nitrobenzene - d5	OD %	OD %	---	OD %	OD %	
Surrogate - 2-Fluorobiphenyl	OD %	OD %	---	OD %	OD %	
Surrogate - Terphenyl-d14	OD %	OD %	---	OD %	OD %	
Dilution Factor	25	25	---	100	100	
Prep Date	04.28.00	05.31.00	---	04.28.00	05.31.00	
Analysis Date	05.10.00	06.02.00	---	05.10.00	06.02.00	
Analysis Time	12:57	00:32	---	13:26	01:34	
Batch ID	0428A	0531B	---	0428A	0531B	
Instrument ID	MSE5973	MSK5972	---	MSE5973	MSK5972	

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00	SIL053
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053
02705-2	Leach-G-1	04-26-00	SIL053
02705-2-RE	Leach-G-1	04-26-00	SIL053
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2 02705-2-RE	
Polychlorinated Biphenyls (680)			
Monochlorobiphenyl, ug/l	3.8	---	10U
Dichlorobiphenyl, ug/l	2.3	---	10U
Trichlorobiphenyl, ug/l	2.6	---	10U
Tetrachlorobiphenyl, ug/l	7.1	---	20U
Pentachlorobiphenyl, ug/l	37	---	5.4J
Hexachlorobiphenyl, ug/l	38	---	20U
Heptachlorobiphenyl, ug/l	11	---	30U
Octachlorobiphenyl, ug/l	5.0	---	30U
Nonachlorobiphenyl, ug/l	0.80J	---	50U
Decachlorobiphenyl, ug/l	2.5U	---	50U
Surrogate - DCB 13C12	77 %	---	OD %
Dilution Factor	5	---	100
Prep Date	05.02.00	---	05.02.00
Analysis Date	05.16.00	---	05.22.00
Analysis Time	10:14	---	16:20
Batch ID	0502D	---	0502D
Instrument ID	MSJ5971	---	MSJ5971

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REPORT OF RESULTS

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02705-1	Leach-I-1		04-25-00/15:00	SIL053
02705-1-RE	Leach-I-1		04-25-00/15:00	SIL053
02705-1-DL	Leach-I-1		04-25-00/15:00	SIL053
02705-2	Leach-G-1		04-26-00	SIL053
02705-2-RE	Leach-G-1		04-26-00	SIL053
PARAMETER	02705-1 02705-1-RE 02705-1-DL		02705-2 02705-2-RE	
C1-Pesticides/PCB (8081)				
Aldrin, ug/l	0.19JP	---	6.7U	0.23JP
alpha-BHC, ug/l	2.5	---	1.8DJ	0.54JP
beta-BHC, ug/l	0.37U	---	1.9U	0.28U
gamma-BHC (Lindane), ug/l	X	---	2.5U	0.38U
delta-BHC, ug/l	1.9P	---	1.6U	0.24U
4,4'-DDD, ug/l	2.7U	---	13U	2.0U
4,4'-DDE, ug/l	2.7U	---	13U	2.0U
4,4'-DDT, ug/l	2.7U	---	13U	2.0U
Dieldrin, ug/l	1.5JP	---	13U	2.0U
Endosulfan I, ug/l	1.3U	---	6.7U	1.0U
Endosulfan II, ug/l	2.7U	---	13U	2.0U
Endosulfan sulfate, ug/l	2.7U	---	13U	2.0U
Endrin, ug/l	2.7U	---	13U	2.0U
Endrin aldehyde, ug/l	2.7U	---	13U	2.0U
Heptachlor, ug/l	2.5P	---	0.73DJP	1.0U
Heptachlor epoxide, ug/l	1.3JP	---	6.7U	1.0U
Methoxychlor, ug/l	13U	---	67U	10U
Toxaphene, ug/l	130U	---	670U	100U

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1		04-25-00/15:00	SIL053
02705-1-RE	Leach-I-1		04-25-00/15:00	SIL053
02705-1-DL	Leach-I-1		04-25-00/15:00	SIL053
02705-2	Leach-G-1		04-26-00	SIL053
02705-2-RE	Leach-G-1		04-26-00	SIL053
PARAMETER	02705-1 02705-1-RE 02705-1-DL		02705-2 02705-2-RE	
Surrogate - 2,4,5,6-Tetrachloro-m-xylene (TCMX)	0 %D ---		0 %D ---	0 %D ---
Surrogate - DCB	0 %D ---		0 %D ---	0 %D ---
Alpha Chlordane, ug/l	1.3U ---		6.7U ---	1.0U ---
Gamma Chlordane, ug/l	1.3U ---		6.7U ---	1.0U ---
Endrin ketone, ug/l	2.7U ---		13U ---	2.0U ---
Dilution Factor	20 ---		100 ---	20 ---
Prep Date	04.28.00 ---		04.28.00 ---	04.28.00 ---
Analysis Date	05.15.00 ---		05.15.00 ---	05.15.00 ---
Analysis Time	17:35 ---		17:13 ---	17:57 ---
Batch ID	0428R ---		0428R ---	0428R ---
Instrument ID	SGNECD ---		SGNECD ---	SGNECD ---

LOG NO: S0-02705

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1		04-25-00/15:00	SIL053
02705-1-RE	Leach-I-1		04-25-00/15:00	SIL053
02705-1-DL	Leach-I-1		04-25-00/15:00	SIL053
02705-2	Leach-G-1		04-26-00	SIL053
02705-2-RE	Leach-G-1		04-26-00	SIL053
PARAMETER	02705-1 02705-1-RE 02705-1-DL		02705-2 02705-2-RE	
Chlorinated Herbicides (8151)				
2,4-D, ug/l	1300E	---	1300D	50U
2,4-DB, ug/l	50U	---	100U	50U
2,4,5-T, ug/l	50U	---	100U	380P
2,4,5-TP (Silvex), ug/l	50U	---	100U	50U
Dalapon, ug/l	12000U	---	24000U	12000U
Dicamba, ug/l	120U	---	240U	120U
Dichloroprop, ug/l	600U	---	1200U	600U
Dinoseb, ug/l	600U	---	1200U	600U
MCPA[(4-chloro-2-methylphenoxy)-acetic acid], ug/l	12000U	---	24000U	12000U
MCPP[2-(4-chloro-2-methylphenoxy)-propanoic acid], ug/l	33000P	---	34000DP	12000U
Surrogate-DCAA	0 %D	---	0 %D	0 %D
Pentachlorophenol, ug/l	840E	---	830D	380
Dilution Factor	100	---	200	100
Prep Date	05.02.00	---	05.02.00	05.02.00
Analysis Date	05.25.00	---	05.25.00	05.11.00
Analysis Time	06:52	---	06:29	01:31
Batch ID	05020	---	05020	05020
Instrument ID	SGRECD	---	SGRECD	SGRECD

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REPORT OF RESULTS

DATE/

TIME SAMPLED SDG#

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES		
02705-1	Leach-I-1	04-25-00/15:00	SIL053
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053
02705-2	Leach-G-1	04-26-00	SIL053
02705-2-RE	Leach-G-1	04-26-00	SIL053

PARAMETER	02705-1	02705-1-RE	02705-1-DL	02705-2	02705-2-RE
Cyanide, Total (9010), mg/l	0.013			0.010U	
Dilution Factor	1	---	---	1	---
Prep Date	05.04.00	---	---	05.04.00	---
Analysis Date	05.04.00	---	---	05.04.00	---
Analysis Time	19:27	---	---	19:27	---
Batch ID	0504S	---	---	0504S	---

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02705-1	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053	
02705-2	Leach-G-1	04-26-00	SIL053	
02705-2-RE	Leach-G-1	04-26-00	SIL053	
PARAMETER	02705-1	02705-1-RE	02705-1-DL	02705-2
Volatiles by GC/MS (8260)				02705-2-RE
Chloromethane, ug/l	250U	---	1200U	26J
Bromomethane (Methyl bromide), ug/l	240U	---	1200U	98U
Vinyl chloride, ug/l	100J	---	110DJ	160
Chloroethane, ug/l	250U	---	1200U	100U
Methylene chloride (Dichloromethane), ug/l	14J	---	590U	13J
Acetone, ug/l	10000E	---	12000D	730
Carbon disulfide, ug/l	120U	---	620U	50U
1,1-Dichloroethene, ug/l	480	---	580DJ	4.8J
1,1-Dichloroethane, ug/l	3700	---	4300D	50U
Cis/Trans-1,2-Dichloroethene, ug/l	12000E	---	15000D	1900
Chloroform, ug/l	26J	---	620U	32J
1,2-Dichloroethane, ug/l	120U	---	620U	50U
2-Butanone (MEK), ug/l	620U	---	3100U	250U
1,1,1-Trichloroethane, ug/l	10000E	---	13000D	50U
Carbon tetrachloride, ug/l	120U	---	620U	50U

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02705-1-RE	Leach-I-1		04-25-00/15:00	SIL053
02705-1-DL	Leach-I-1		04-25-00/15:00	SIL053
02705-2	Leach-G-1		04-26-00	SIL053
02705-2-RE	Leach-G-1		04-26-00	SIL053
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2 02705-2-RE		
Bromodichloromethane, ug/l	120U	---	620U	50U
1,1,2,2-Tetrachloroethane, ug/l	120U	---	620U	50U
1,2-Dichloropropane, ug/l	120U	---	620U	50U
trans-1,3-Dichloropropene, ug/l	120U	---	620U	50U
Trichloroethene, ug/l	620	---	710D	340
Dibromochloromethane, ug/l	120U	---	620U	50U
1,1,2-Trichloroethane, ug/l	38J	---	620U	50U
Benzene, ug/l	690	---	800D	880
cis-1,3-Dichloropropene, ug/l	25U	---	120U	10U
Bromoform, ug/l	120U	---	620U	50U
2-Hexanone, ug/l	620U	---	3100U	250U
4-Methyl-2-pentanone (MIBK), ug/l	1600	---	1900DJ	930
Tetrachloroethene, ug/l	25J	---	37DJ	99
Toluene, ug/l	430	---	500DJ	300
Chlorobenzene, ug/l	950	---	1100D	2800E
Ethylbenzene, ug/l	88J	---	96DJ	120
Styrene, ug/l	120U	---	620U	50U
Xylenes, Total, ug/l	130	---	140DJ	180
Surrogate - Toluene-d8	108 ‰	---	108 ‰	106 ‰

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02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053	
02705-2	Leach-G-1	04-26-00	SIL053	
02705-2-RE	Leach-G-1	04-26-00	SIL053	
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2	02705-2-RE	
Surrogate - 4-Bromofluorobenzene	106 %	104 %	106 %	---
Surrogate - Dibromofluoromethane	110 %	110 %	112 %	---
Dilution Factor	25	125	10	---
Analysis Date	05.08.00	05.09.00	05.08.00	---
Analysis Time	22:50	01:09	23:12	---
Batch ID	2B0508	2B0508	2B0508	---
Instrument ID	MSB5973	MSB5973	MSB5973	---
Suspended Solids (160.2), mg/l	3000		180	
Dilution Factor	1	---	1	---
Prep Date	04.28.00	---	04.28.00	---
Analysis Date	05.01.00	---	05.01.00	---
Analysis Time	09:15	---	09:15	---
Batch ID	0428A	---	0428A	---
Biochemical Oxygen Demand (5 Day) (405.1/5210B), mg/l	300		1900	
Dilution Factor	---	---	---	---
Prep Date	04.27.00	---	04.27.00	---
Analysis Date	04.27.00	---	04.27.00	---
Analysis Time	16:15	---	16:15	---
Batch ID	0427A	---	0427A	---

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LOG NO: S0-02705

Received: 27 APR 00

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Ms. Karen Storne
O'Brien & Gere Engineers
5000 Brittonfield Parkway
E. Syracuse, NY 13057

Client PO. No.: 4503148706

Requisition: VEN#203708

Contract No.: S7219

Project: 23548/Sauget Area 1

Sampled By: Client

Code: 102301025

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053	
02705-2	Leach-G-1	04-26-00	SIL053	
02705-2-RE	Leach-G-1	04-26-00	SIL053	
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2 02705-2-RE		
Total Dissolved Solids (160.1), mg/l	4000		2800	
Dilution Factor	1	---	1	---
Prep Date	04.28.00	---	04.28.00	---
Analysis Date	05.01.00	---	05.01.00	---
Analysis Time	15:40	---	15:40	---
Batch ID	0428A	---	0428A	---
Instrument ID		---		---
Volatile Solids (160.4), %	100		100	
Dilution Factor	1	---	1	---
Prep Date	05.02.00	---	05.02.00	---
Analysis Date	05.04.00	---	05.04.00	---
Analysis Time	16:15	---	16:15	---
Batch ID	0502A	---	0502A	---

LOG NO: S0-02705
Received: 27 APR 00
Reported: 06 JUN 00

Ms. Karen Storne
O'Brien & Gere Engineers
5000 Brittonfield Parkway
E. Syracuse, NY 13057

Client PO. No.: 4503148706

Requisition: VEN#203708
Contract No.: S7219

Project: 23548/Sauget Area 1
Sampled By: Client
Code: 102301025

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053	
02705-2	Leach-G-1	04-26-00	SIL053	
02705-2-RE	Leach-G-1	04-26-00	SIL053	
PARAMETER	02705-1 02705-1-RE 02705-1-DL	02705-2 02705-2-RE		
Total Organic Carbon (415.1), mg/l	420		1400	
Dilution Factor	1	---	100	---
Prep Date	05.02.00	---	05.02.00	---
Analysis Date	05.02.00	---	05.02.00	---
Analysis Time	12:16	---	12:54	---
Batch ID	0502A	---	0502A	---
Instrument ID	TOC1	---	TOC1	---
Chemical Oxygen Demand (410.1), mg/l	1200		3000	
Dilution Factor	10	---	10	---
Prep Date	05.03.00	---	05.03.00	---
Analysis Date	05.04.00	---	05.04.33	---
Analysis Time	10:00	---	10:00	---
Batch ID	0503A	---	0503A	---
Instrument ID	COD	---	COD	---

LOG NO: S0-02705
Received: 27 APR 00
Reported: 06 JUN 00

Ms. Karen Storne
O'Brien & Gere Engineers
5000 Brittonfield Parkway
E. Syracuse, NY 13057

Client PO. No.: 4503148706

Requisition: VEN#203708
Contract No.: S7219
Project: 23548/Sauget Area 1
Sampled By: Client
Code: 102301025

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE /	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00		SIL053
02705-1-RE	Leach-I-1	04-25-00/15:00		SIL053
02705-1-DL	Leach-I-1	04-25-00/15:00		SIL053
02705-2	Leach-G-1	04-26-00		SIL053
02705-2-RE	Leach-G-1	04-26-00		SIL053
PARAMETER	02705-1 02705-1-RE 02705-1-DL		02705-2 02705-2-RE	
Total Kjeldahl Nitrogen-N (351.2), mg/l	42		39	
Dilution Factor	20	---	20	---
Prep Date	05.08.00	---	05.08.00	---
Analysis Date	05.10.00	---	05.10.00	---
Analysis Time	08:29	---	08:32	---
Batch ID	0508C	---	0508C	---
Instrument ID	LT2	---	LT2	---
Nitrate-N (353.2), mg/l	0.050U		0.050U	
Dilution Factor	1	---	1	---
Prep Date	04.27.00	---	04.27.00	---
Analysis Date	04.27.00	---	04.27.00	---
Analysis Time	09:13	---	09:14	---
Batch ID	0505C	---	0505C	---
Instrument ID	NO3	---	NO3	---

LOG NO: S0-02705
Received: 27 APR 00
Reported: 06 JUN 00

Ms. Karen Storne
O'Brien & Gere Engineers
5000 Brittonfield Parkway
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Client PO. No.: 4503148706

Requisition: VEN#203708
Contract No.: S7219
Project: 23548/Sauget Area 1
Sampled By: Client
Code: 102301025
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-RE	Leach-I-1	04-25-00/15:00	SIL053	
02705-1-DL	Leach-I-1	04-25-00/15:00	SIL053	
02705-2	Leach-G-1	04-26-00	SIL053	
02705-2-RE	Leach-G-1	04-26-00	SIL053	
<hr/>				
PARAMETER	02705-1	02705-1-RE	02705-1-DL	02705-2
Ammonia (as N) (350.1), mg/l	17			16
Dilution Factor	10	---	---	20
Prep Date	05.08.00	---	---	05.08.00
Analysis Date	05.08.00	---	---	05.08.00
Analysis Time	10:16	---	---	11:36
Batch ID	0508A	---	---	0508D
Instrument ID	NH3	---	---	NH3
<hr/>				
Sulfate as SO4 (300.0), mg/l	290			340
Dilution Factor	50	---	---	50
Prep Date	05.09.00	---	---	05.09.00
Analysis Date	05.09.00	---	---	05.09.00
Analysis Time	20:54	---	---	21:23
Batch ID	0509A	---	---	0509A
<hr/>				
Nitrite-N (353.2), mg/l	0.011B			0.043B
Dilution Factor	1	---	---	1
Prep Date	04.27.00	---	---	04.27.00
Analysis Date	04.27.00	---	---	04.27.00
Analysis Time	21:03	---	---	21:03
Batch ID	0427A	---	---	0427A
<hr/>				

LOG NO: S0-02705

Received: 27 APR 00

Reported: 06 JUN 00

Ms. Karen Storne
O'Brien & Gere Engineers
5000 Brittonfield Parkway
E. Syracuse, NY 13057

Client PO. No.: 4503148706

Requisition: VEN#203708

Contract No.: S7219

Project: 23548/Sauget Area 1

Sampled By: Client

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REPORT OF RESULTS

DATE /

TIME SAMPLED SDG#

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE /	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00		SIL053
02705-1-RE	Leach-I-1	04-25-00/15:00		SIL053
02705-1-DL	Leach-I-1	04-25-00/15:00		SIL053
02705-2	Leach-G-1		04-26-00	SIL053
02705-2-RE	Leach-G-1		04-26-00	SIL053

PARAMETER	02705-1	02705-1-RE	02705-1-DL	02705-2	02705-2-RE
-----------	---------	------------	------------	---------	------------

Chloride (325.2), mg/l	690			380	
Dilution Factor	20	20	20	20	20
Prep Date	05.04.00	05.04.00	05.04.00	05.04.00	05.04.00
Analysis Date	05.04.00	05.04.00	05.04.00	05.04.00	05.04.00
Analysis Time	08:14	08:14	08:14	08:14	08:14
Batch ID	0504B	0504B	0504B	0504B	0504B

pH (150.1), units	6.3			6.4	
Dilution Factor	1	---	---	1	---
Prep Date	04.27.00	---	---	04.27.00	---
Analysis Date	04.27.00	---	---	04.27.00	---
Analysis Time	14:46	---	---	14:46	---
Batch ID	0427A	---	---	0427A	---

Specific Conductance (120.1), umhos/cm	4700			4400	
Dilution Factor	10	---	---	10	---
Prep Date	04.28.00	---	---	04.28.00	---
Analysis Date	04.28.00	---	---	04.28.00	---
Analysis Time	13:30	---	---	13:30	---
Batch ID	0428B	---	---	0428B	---

LOG NO: SO-02705
Received: 27 APR 00
Reported: 06 JUN 00

Ms. Karen Storne
O'Brien & Gere Engineers
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Client PO. No.: 4503148706

Requisition: VEN#203708
Contract No.: S7219
Project: 23548/Sauget Area 1
Sampled By: Client
Code: 102301025

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
02705-1	Leach-I-1	04-25-00/15:00		SIL053
02705-1-RE	Leach-I-1	04-25-00/15:00		SIL053
02705-1-DL	Leach-I-1	04-25-00/15:00		SIL053
02705-2	Leach-G-1		04-26-00	SIL053
02705-2-RE	Leach-G-1		04-26-00	SIL053
PARAMETER	02705-1 02705-1-RE 02705-1-DL	04-25-00/15:00	04-26-00	04-26-00
Ortho-Phosphate-P (365.1), mg/l	0.22		0.44	
Dilution Factor	1	---	---	1
Prep Date	04.27.00	---	04.27.00	---
Analysis Date	04.27.00	---	04.27.00	---
Analysis Time	21:00	---	21:00	---
Batch ID	0427A	---	0427A	---
Color, True (110.2), PCU	1000		2000	
Dilution Factor	50	---	50	---
Prep Date	04.27.00	---	04.27.00	---
Analysis Date	04.27.00	---	04.27.00	---
Analysis Time	16:00	---	16:00	---
Batch ID	0427A	---	0427A	---
Total Dissolved Inorganic Solids (2540C/E), mg/l	2300		2000	
Dilution Factor	1	---	1	---
Prep Date	05.02.00	---	05.02.00	---
Analysis Date	05.04.00	---	05.04.00	---
Analysis Time	16:15	---	16:15	---
Batch ID	0502A	---	0502A	---

LOG NO: S0-02705
Received: 27 APR 00
Reported: 06 JUN 00

Ms. Karen Storne
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5000 Brittonfield Parkway
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Client PO. No.: 4503148706

Requisition: VEN#203708
Contract No.: S7219
Project: 23548/Sauget Area 1
Sampled By: Client
Code: 102301025

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
02705-3	BR-I	04-25-00/15:45	SIL053
02705-4	Trip Blank	04-25-00	SIL053
PARAMETER	02705-3 02705-4		
Volatiles by GC/MS (8260)			
Chloromethane, ug/l	50U	10U	
Bromomethane (Methyl bromide), ug/l	49U	9.8U	
Vinyl chloride, ug/l	50U	10U	
Chloroethane, ug/l	50U	10U	
Methylene chloride (Dichloromethane), ug/l	4.0JB	4.7U	
Acetone, ug/l	250U	50U	
Carbon disulfide, ug/l	25U	5.0U	
1,1-Dichloroethene, ug/l	25U	5.0U	
1,1-Dichloroethane, ug/l	25U	5.0U	
Cis/Trans-1,2-Dichloroethene, ug/l	25U	5.0U	
Chloroform, ug/l	25U	5.0U	
1,2-Dichloroethane, ug/l	25U	5.0U	
2-Butanone (MEK), ug/l	120U	25U	
1,1,1-Trichloroethane, ug/l	25U	5.0U	
Carbon tetrachloride, ug/l	25U	5.0U	
Bromodichloromethane, ug/l	25U	5.0U	
1,1,2,2-Tetrachloroethane, ug/l	25U	5.0U	
1,2-Dichloropropane, ug/l	25U	5.0U	
trans-1,3-Dichloropropene, ug/l	25U	5.0U	
Trichloroethene, ug/l	3.7J	2.7U	

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LOG NO: S0-02705

Received: 27 APR 00

Reported: 06 JUN 00

Ms. Karen Storne
O'Brien & Gere Engineers
5000 Brittonfield Parkway
E. Syracuse, NY 13057

Client PO. No.: 4503148706

Requisition: VEN#203708

Contract No.: S7219

Project: 23548/Sauget Area 1

Sampled By: Client

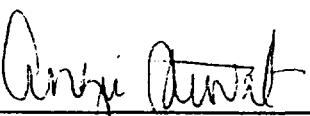
Code: 102301025

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
02705-3	BR-I		04-25-00/15:45	SIL053
02705-4	Trip Blank		04-25-00	SIL053
PARAMETER	02705-3	02705-4		
Dibromochloromethane, ug/l	25U	5.0U		
1,1,2-Trichloroethane, ug/l	25U	5.0U		
Benzene, ug/l	63	1.2U		
cis-1,3-Dichloropropene, ug/l	5.0U	1.0U		
Bromoform, ug/l	25U	5.0U		
2-Hexanone, ug/l	120U	25U		
4-Methyl-2-pentanone (MIBK), ug/l	120U	25U		
Tetrachloroethene, ug/l	20J	5.0U		
Toluene, ug/l	44	5.0U		
Chlorobenzene, ug/l	240	5.0U		
Ethylbenzene, ug/l	390	5.0U		
Styrene, ug/l	25U	0.40J		
Xylenes, Total, ug/l	36	5.0U		
Surrogate - Toluene-d8	106 %	108 %		
Surrogate - 4-Bromofluorobenzene	104 %	106 %		
Surrogate - Dibromofluoromethane	112 %	108 %		
Dilution Factor	5	1		
Analysis Date	05.09.00	05.09.00		
Analysis Time	13:07	02:17		
Batch ID	1B0509	2B0508		
Instrument ID	MSB5973	MSB5973		

X = Unable to determine analyte presence at this concentration due to matrix interference.


Angie Stewart, Project Manager

Final Page Of Report

TRIANGLE LABORATORIES, INC.
 Sample Results for Project 50956
 Method MIT2 Analysis (DB-5)

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Vta File	U078305	U078306	U078307	T002394
Sample ID	BR-G-FD	BR-G-MS	BR-G-MSD	Leach-G-1
Units	ppq	ppq	ppq	ppq
Extraction Date	05/11/2000	05/11/2000	05/11/2000	05/11/2000
Analysis Date	05/16/2000	05/16/2000	05/16/2000	05/16/2000
Instrument	U	U	U	T
Matrix	WATER	WATER	WATER	WATER
Extraction Type				
Analytes				
2378-TcDD	{4870}	E	{3170}	822
12378-PeCDD	6060		6500	2640
123478-HxCDD	2860		4070	2110
123678-HxCDD	58110	E	41180	4830
123789-HxCDD	27990	E	17680	2740
1234678-HpCDD	414870	SE	297660	39370
OCDD	135670	SE	132060	275240
2378-TCDF	{396010}	SE	{319100}	101970
12378-PeCDF	{5610}	X	5020	2010
23478-PeCDF	7870		7230	2370
123478-HxCDF	34010	E	25490	3930
123678-HxCDF	5430		5550	2360
234678-HxCDF	13310		10290	2740
123789-HxCDF	(17.5)		4410	2680
1234678-HpCDF	188720	E	135110	12000
1234789-HpCDF	124190	QE	67300	6190
OCDF	171060	SQE	172810	251440
TOTAL TCDD	176550	QE		70.2
TOTAL PeCDD	103140	E		70.8
TOTAL HxCDD	647910	E		270
TOTAL HpCDD	1788660	QSE		1050
TOTAL TCDF	440330	QSE		641
TOTAL PeCDF	202410	QSE		306
TOTAL HxCDF	176560	XE		473
TOTAL HpCDF	935250	QE		973

Other Standards Percent Recovery Summary (% Rec)

37C1-TCDD	126	92.7	78.1	60.3
-----------	-----	------	------	------

Other Standards Percent Recovery Summary (% Rec)

13C12-PeCDF	234	102	98.2	97.1	71.1	
13C12-HxCDF	478	39.8	V	60.7	81.3	87.9
13C12-HxCDD	478	85.7		101	98.0	93.2
13C12-HpCDF	789	70.6		79.7	92.4	84.0

Other Standards Percent Recovery Summary (% Rec)

13C12-HxCDF	789	62.4	Q	80.0	77.6	73.6
13C12-HxCDF	234	68.6		83.6	76.3	79.9

Internal Standards Percent Recovery Summary (% Rec)

13C12-2378-TCDF	104	QRO	92.3	Q	73.5	56.8
13C12-2378-TCDD	117		101		73.8	56.7

TRIANGLE LABORATORIES, INC.
Sample Results for Project 50956
Method MIT2 Analysis (DB-5)

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Data File U078305 U078306 U078307 T002394
Sample ID BR-G-FD BR-G-MS BR-G-MSD Leach-G-1

Units	ppq	ppq	ppq	ppq
Extraction Date	05/11/2000	05/11/2000	05/11/2000	05/11/2000
Analysis Date	05/16/2000	05/16/2000	05/16/2000	05/16/2000
Instrument	U	U	U	T
Matrix	WATER	WATER	WATER	WATER
Extraction Type				

Internal Standards Percent Recovery Summary (% Rec)

13C12-PeCDF 123	97.5	103	93.6	60.3
13C12-PeCDD 123	120	102	89.2	64.5
13C12-HxCDF 678	45.4	72.0	79.5	67.9
13C12-HxCDD 678	81.6	108	95.2	67.1
13C12-HpCDF 678	32.0	Q	52.2	64.9
13C12-HpCDD 678	52.5	Q	69.9	80.2
	444	QRO	438	71.0

TRIANGLE LABORATORIES, INC.
Sample Results for Project 50956
Method 8290X (DB-225)

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=====
ta File P001704 P001705 P001706 P001711
Sample ID BR-G-EB BR-G BR-G-FD Leach-G-1
=====

Units ppq ppq ppq ppq
Extraction Date 05/11/2000 05/11/2000 05/11/2000 05/11/2000
Analysis Date 05/16/2000 05/16/2000 05/16/2000 05/16/2000
Instrument P P P P
Matrix WATER WATER WATER WATER
=====

Extraction Type

=====
Analytes
2378-TCDF (6.5) 3840 9080 8.6 J
=====

Internal Standards Percent Recovery Summary (% Rec)
13C12-2378-TCDF 56.6 72.8 82.3 RO 62.1

TRIANGLE LABORATORIES, INC.
 Sample Results for Project 50956n2
 Method MIT2 Analysis (DB-5)

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Data File	T002629	T002630	T002631	T002632
Sample ID	TLI Blank	Leach-I-1	TLI LCS	TLI LCSD
Units	ppq	ppq	ppq	ppq
Extraction Date	05/23/2000	05/23/2000	05/23/2000	05/23/2000
Analysis Date	05/30/2000	05/30/2000	05/30/2000	05/30/2000
Instrument	T	T	T	T
Matrix	WATER	WATER	WATER	WATER
Extraction Type				
Analytes				
2378-TCDD	(1.0)	(0.9)	382	364
12378-PeCDD	(1.4)	(1.2)	2370	2400
123478-HxCDD	(1.7)	8.9 J	2580	2630
123678-HxCDD	(1.5)	341	2470	2280
123789-HxCDD	(1.6)	56.5	2300	2290
1234678-HpCDD	(1.8)	18440	2180	2080
OCDD	10.3 J	198030 E	4580	4230
2378-TCDF	(0.9)	3.3 J	403	389
12378-PeCDF	(0.8)	{114} X	1960	1920
23478-PeCDF	(1.0)	2.9 J	2290	2390
123478-HxCDF	(1.2)	59.3	2540	2380
123678-HxCDF	2.2 J	12.4 JB	2360	2310
234678-HxCDF	(1.3)	18.6 J	2780	2880
123789-HxCDF	(1.4)	(1.3)	2540	2610
1234678-HpCDF	{2.6} J	4070	2310	2240
1234789-HpCDF	(1.6)	222	1810	1890
OCDF	(2.1)	29830	3860	3690
TOTAL TCDD	(1.0)	(0.9)		
TOTAL PeCDD	(1.4)	6.0		
TOTAL HxCDD	(1.5)	1690		
TOTAL HpCDD	(1.8)	40400 E		
TOTAL TCDF	(0.9)	3.3 X		
TOTAL PeCDF	(0.9)	8.4 X		
TOTAL HxCDF	2.2	1900 X		
TOTAL HpCDF	{2.6}	21700		
Other Standards Percent Recovery Summary (% Rec)				
37C1-TCDD	47.2	52.3	54.6	48.5
Other Standards Percent Recovery Summary (% Rec)				
13C12-PeCDF 234	62.0	66.4	67.3	67.9
13C12-HxCDF 478	58.9	62.9	65.2	60.3
13C12-HxCDD 478	66.9	70.1	75.0	73.4
13C12-HpCDF 789	67.0	68.8	64.7	67.7
Other Standards Percent Recovery Summary (% Rec)				
13C12-HxCDF 789	65.8	65.8	67.8	67.3
13C12-HxCDF 234	71.0	71.4	72.9	73.7
Internal Standards Percent Recovery Summary (% Rec)				
13C12-2378-TCDF	67.5	70.8	73.8	67.2
13C12-2378-TCDD	63.3	67.4	72.1	65.1

TRIANGLE LABORATORIES, INC.
Sample Results for Project 50956n2
Method MIT2 Analysis (DB-5)

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05/31/2000

Data File	T002629	T002630	T002631	T002632
Sample ID	TLI Blank	Leach-I-1	TLI LCS	TLI LCSD

Units	ppq	ppq	ppq	ppq
Extraction Date	05/23/2000	05/23/2000	05/23/2000	05/23/2000
Analysis Date	05/30/2000	05/30/2000	05/30/2000	05/30/2000
Instrument	T	T	T	T
Matrix	WATER	WATER	WATER	WATER
Extraction Type				

Internal Standards Percent Recovery Summary (% Rec)

13C12-PeCDF 123	76.8	81.8	84.5	81.8
13C12-PeCDD 123	88.5	94.3	101	99.3
13C12-HxCDF 678	72.9	75.3	76.4	73.4
13C12-HxCDD 678	81.6	83.5	84.3	84.6
13C12-HpCDF 678	88.4	92.1	89.3	88.5
13C12-HpCDD 678	95.4	105	92.4	97.5
13C12-OCDD	94.1	130	92.2	97.9

(Estimated Maximum Possible Concentration), (Detection Limit).

ω

ATTACHMENT 3

ANALYTICAL DATA FOR ACTIVATED CARBON ADSORPTION TESTS





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LOG NO: S0-05067

Received: 28 JUL 00

Reported: 14 SEP 00

Mr. Pat Campbell

Advent Group

201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 120900918

Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05067-1	Adsorption Batch Control - not shaken	07-26-00/15:00		SIL055
05067-2	Adsorption Batch Control - shaken	07-27-00/10:15		SIL055
05067-3	Adsorption Batch pH 5 - shaken	07-27-00/10:15		SIL055
05067-4	Adsorption Batch pH 7 - shaken	07-27-00/10:15		SIL055
05067-5	Adsorption Batch pH 9 - shaken	07-27-00/10:15		SIL055
PARAMETER	05067-1	05067-2	05067-3	05067-4
Total Organic Carbon (415.1), mg/l	520	490	170	260
Dilution Factor	10	10	1	1
Prep Date	08.07.00	08.07.00	08.07.00	08.04.00
Analysis Date	08.07.00	08.07.00	08.07.00	08.04.00
Batch ID	0807A	0807A	0807A	0804B
				0804B



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LOG NO: S0-05067
Received: 28 JUL 00
Reported: 14 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 120900918

Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05067-6	Adsorption Batch pH 11 - shaken		07-27-00/10:15	SIL055
PARAMETER	05067-6			
Total Organic Carbon (415.1), mg/l	310			
Dilution Factor	1			
Prep Date	08.04.00			
Analysis Date	08.04.00			
Batch ID	0804B			

Serial Number

025765



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRoche Avenue, Savannah, GA 31401
 2816 Industrial Plaza Drive, Tallahassee, FL 32301
 960 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd, Suite 100, Tampa, FL 33634

Phone: (912) 354-7858 Fax: (912) 352-0165
 Phone: (850) 878-3994 Fax: (850) 878-9504
 Phone: (334) 666-6633 Fax: (334) 666-6690
 Phone: (813) 885-7427 Fax: (813) 885-7049

SAMPLE REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSES								PAGE	OF			
				COMPOSITE (CLOTH GRAB, ETC.)	AQUEOUS (WATER)	SOLID OR SEMI-SOLID	AIR	NON-AQUEOUS LIQUID/OIL SOLVENT, ETC.	TOC	HCl						
Leachate [readability]	00523	TN														
A Stewart																
Pat Campbell	615-377-4775	615-377-4776														
The Advent Group	J.Baltz@adventgroup.org															
Client Address	201 Summit View Dr., Brentwood, TN 37027															
COMPANY CONTRACTING THIS WORK (if applicable)																
SAMPLE DATE	TIME	SAMPLE IDENTIFICATION				NUMBER OF CONTAINERS SUBMITTED								REMARKS		
7/26	3:00	Adsorption Batch Control - not shaken				X										
7/27	10:15	Adsorption Batch Control - Shaken				X										
7/27	10:15	Adsorption Batch pH 5 - shaken				X										
7/27	10:15	Adsorption Batch pH 7 - shaken				X										
7/27	10:15	Adsorption Batch pH 9 - shaken				X										
7/27	10:15	Adsorption Batch pH 11 - shaken				X										
RELINQUISHED BY: (SIGNATURE)																
		DATE	TIME	RELINQUISHED BY: (SIGNATURE)				DATE	TIME	RELINQUISHED BY: (SIGNATURE)				DATE	TIME	
		7/29/00		Jason Baltz				7/27/00	5:30pm							
RECEIVED BY: (SIGNATURE)																
		DATE	TIME	RECEIVED BY: (SIGNATURE)				DATE	TIME	RECEIVED BY: (SIGNATURE)				DATE	TIME	
LABORATORY USE ONLY																
RECEIVED FOR LABORATORY BY:		DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL-GL LOG NO								LABORATORY REMARKS		
		7/28/00	9:30	YES		05067										

ORIGINAL



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LOG NO: S0-05204

Received: 03 AUG 00

Reported: 27 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 104400928

Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE /	TIME SAMPLED	SDG#
05204-1	CARBON BATCH 2 - CONTROL NOT SHAKEN	08-01-00/12:00	SIL057	
05204-2	CARBON BATCH 2 - UNADJUSTED 1MG/MG	08-02-00/12:00	SIL057	
05204-3	CARBON BATCH 2 - UNADJUSTED 2MG/MG	08-02-00/12:00	SIL057	
05204-4	CARBON BATCH 2 - UNADJUSTED 4MG/MG	08-02-00/12:00	SIL057	
05204-5	CARBON BATCH 2 - UNADJUSTED 8MG/MG	08-02-00/12:00	SIL057	
PARAMETER	05204-1	05204-2	05204-3	05204-4
Total Organic Carbon (415.1), mg/l	490	430	390	280
Dilution Factor	10	1	1	1
Prep Date	08.08.00	08.07.00	08.07.00	08.07.00
Analysis Date	08.08.00	08.07.00	08.07.00	08.07.00
Batch ID	0808A	0807B	0807B	0807B



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LOG NO: S0-05204
Received: 03 AUG 00
Reported: 27 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 104400928

REPORT OF RESULTS

DATE/ TIME SAMPLED SDG#

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
05204-6	CARBON BATCH 2 - UNADJUSTED 16MG/MG	08-02-00/12:00	SIL057
05204-7	CARBON BATCH 2 - UNADJUSTED 32MG/MG	08-02-00/12:00	SIL057
05204-8	CARBON BATCH 2 - UNADJUSTED 128MG/MG	08-02-00/12:00	SIL057
05204-9	CARBON BATCH 2 - CONTROL SHAKEN	08-02-00/12:00	SIL057
05204-10	CARBON BATCH 2 - PH5 1MG/MG	08-02-00/12:00	SIL057

PARAMETER	05204-6	05204-7	05204-8	05204-9	05204-10
Total Organic Carbon (415.1), mg/l	160	66	15	490	420
Dilution Factor	1	1	1	10	1
Prep Date	08.07.00	08.07.00	08.07.00	08.08.00	08.07.00
Analysis Date	08.07.00	08.07.00	08.07.00	08.08.00	08.07.00
Batch ID	0807B	0807B	0807B	0808A	0807B



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LOG NO: S0-05204

Received: 03 AUG 00

Reported: 27 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 104400928

Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#	
05204-11	CARBON BATCH 2 - PH5 2MG/MG		08-02-00/12:00	SIL057	
05204-12	CARBON BATCH 2 - PH5 4MG/MG		08-02-00/12:00	SIL057	
05204-13	CARBON BATCH 2 - PH5 8MG/MG		08-02-00/12:00	SIL057	
05204-14	CARBON BATCH 2 - PH5 16MG/MG		08-02-00/12:00	SIL057	
05204-15	CARBON BATCH 2 - PH5 32MG/MG		08-02-00/12:00	SIL057	
PARAMETER	05204-11	05204-12	05204-13	05204-14	05204-15
Total Organic Carbon (415.1), mg/l	340	190	180	92	22
Dilution Factor	1	1	1	1	1
Prep Date	08.07.00	08.07.00	08.07.00	08.07.00	08.07.00
Analysis Date	08.07.00	08.07.00	08.07.00	08.07.00	08.07.00
Batch ID	0807B	0807B	0807B	0807B	0807B



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LOG NO: S0-05204

Received: 03 AUG 00

Reported: 27 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 104400928

Page 4

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05204-16	CARBON BATCH 2 - PH5 128MG/MG		08-02-00/12:00	SIL057
PARAMETER				
		05204-16		
Total Organic Carbon (415.1), mg/l		13		
Dilution Factor		1		
Prep Date		08.07.00		
Analysis Date		08.08.00		
Batch ID		0807C		

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIIA, IIB, and III.

Serial Number

U25/63



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

- 5102 LaRocha Avenue, Savannah, GA 31401 Phone: (912) 354-7858 Fax: (912) 352-0165
 2840 Industrial Plaza Drive, Tallahassee, FL 32301 Phone: (850) 878-3994 Fax: (850) 878-9504
 900 Lakeside Drive, Mobile, AL 36693 Phone: (434) 666-6633 Fax: (334) 666-6696
 c712 Benjamin Rd., Suite 100, Tampa, FL 33631 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE Leachate Treatability	PROJECT NO. 20523	PROJECT LOCATION (STATE) TN	MATRIX TYPE	REQUIRED ANALYSES								PAGE 2	OF 2					
STL LAB PROJECT MANAGER Pat Campbell	P.O. NUMBER	CONTRACT NO.										STANDARD REPORT DELIVERY						
CLIENT NAME The Advent Group	CLIENT PHONE 615-377-4775	CLIENT FAX 615-377-4976										DATE DUE						
CLIENT ADDRESS 201 Summit View Dr, 3rd Fl Brentwood, TN 37027	CLIENT EMAIL J.Battz@adventgroup.org											EXPEDITED REPORT DELIVERY (SURCHARGE)	0					
COMPANY CONTRACTING THIS WORK (if applicable).														DATE DUE				
SAMPLE DATE	TIME	SAMPLE IDENTIFICATION		COMPOSITE (C) OR GRAB (G) / INTEGRATE	AQUEOUS (WATER)	SOLID OR SEMI-SOLID	AIR	INORGANIC/LIQUID/FOIL/SOLVENT, ETC!	NUMBER OF CONTAINERS SUBMITTED								REMARKS	
8/2/00	15:00	Carbon Batch 2 - pH 5.4 mg/mg		X				TIC	1									
8/2/00	12:00	Carbon Batch 2 - pH 5.8 mg/mg		X				HCl	1									
8/2/00	12:00	Carbon Batch 2 - pH 5.16 mg/mg		X					1									
8/2/00	12:00	Carbon Batch 2 - pH 5.32 mg/mg		X					1									
8/2/00	12:00	Carbon Batch 2 - pH 5.128 mg/mg		X					1									

ORIGINAL

RElinquished By: (Signature)	DATE	TIME	RElinquished By: (Signature)	DATE	TIME	RElinquished By: (Signature)	DATE	TIME
RECEIVED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: K. Conn	DATE 8/1/00	TIME 9:10	CUSTODY INTACT <input checked="" type="checkbox"/> YES	CUSTODY SEAL NO.	STL-SL LOG NO.	LABORATORY REMARKS:
--	----------------	--------------	---	---------------------	----------------	---------------------

Su-05204

Serial Number

U25/64



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRochelle Avenue, Savannah, GA 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

Phone: (912) 364-7858 Fax: (912) 362-0165
Phone: (850) 878-3994 Fax: (850) 878-9504
Phone: (334) 666-6633 Fax: (334) 666-6696
Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE <i>Leachate Treatability</i>	PROJECT NO. 00523	PROJECT LOCATION (STATE) TN	MATRIX TYPE	REQUIRED ANALYSES								PAGE 1 OF 2	
PR (LAB) PROJECT MANAGER <i>Pat Campbell</i>	P.O. NUMBER	CONTRACT NO										STANDARD REPORT DELIVERY <input checked="" type="checkbox"/>	
CLIENT (SITE) PM <i>Pat Campbell</i>	CLIENT PHONE 615-377-4775	CLIENT FAX 615-377-4976										DATE DUE _____	
CLIENT NAME <i>The Advent Group</i>	CLIENT EMAIL <i>J.Baltz@adventgroup.org</i>											EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>	
CLIENT ADDRESS <i>201 Summit View Dr, 3rd Fl Brentwood, TN 37027</i>												DATE DUE _____	
COMPANY CONTRACTING THIS WORK (if applicable)													NUMBER OF COOLERS SUBMITTED PER SHIPMENT 1
SAMPLE	SAMPLE IDENTIFICATION		COMPOSITE (C) OR GRADE (G) INDICATE	AQUEOUS WATER	SOLID OR SEMI-SOLID	AIR	NONAQUEOUS LIQUID, OIL, SOLVENT, ETC	TDC	HCl	HNO ₃	NUMBER OF CONTAINERS SUBMITTED	REMARKS	
DATE	TIME												
8/1/00	10:00	Carbon Batch 2 - Control No shaken	X					1					
8/1/00	12:00	Raw leachate - first tiered	X						1				
8/2/00	12:00	Carbon Batch 2 - undisturbed 1 mg/mg	X					1					
8/2/00	12:00	Carbon Batch 2 - unadjusted 3 mg/mg	X					1					
8/2/00	12:00	Carbon Batch 2 - unadjusted 4 mg/mg	X					1					
8/2/00	12:00	Carbon Batch 2 - unadjusted 8 mg/mg	X					1					
8/2/00	12:00	Carbon Batch 2 - unadjusted 16 mg/mg	X					1					
8/2/00	12:00	Carbon Batch 2 - unadjusted 32 mg/mg	X					1					
8/2/00	12:00	Carbon Batch 2 - unadjusted 128 mg/mg	X					1					
8/2/00	12:00	Carbon Batch 2 - control shaken	X					1					
8/2/00	12:00	Carbon Batch 2 - pH 5 1 mg/mg	X					1					
8/2/00	12:00	Carbon Batch 2 - pH 5 2 mg/mg	X					1					
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME					
			<i>Pat Campbell</i>	8/2/00	5:00								
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME					

LABORATORY USE ONLY

DELIVERED TO LABORATORY BY:	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL-SL LOG NO.	LABORATORY REMARKS
<i>K. Connell</i>	8/3/00	9:00	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		50-05204	



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LOG NO: S0-05346
Received: 08 AUG 00
Reported: 27 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 180500927

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05346-1	Carbon Column		08-04-00/15:30	SIL057
PARAMETER	05346-1			
Polychlorinated Biphenyls (680)				
Monochlorobiphenyl, ug/l		0.10U		
Dichlorobiphenyl, ug/l		0.10U		
Trichlorobiphenyl, ug/l		0.10U		
Tetrachlorobiphenyl, ug/l		0.20U		
Pentachlorobiphenyl, ug/l		0.20U		
Hexachlorobiphenyl, ug/l		0.20U		
Heptachlorobiphenyl, ug/l		0.30U		
Octachlorobiphenyl, ug/l		0.30U		
Nonachlorobiphenyl, ug/l		0.50U		
Decachlorobiphenyl, ug/l		0.50U		
Surrogate - DCB 13C12		60 %		
Dilution Factor		1		
Prep Date		08.11.00		
Analysis Date		08.23.00		
Batch ID		0811B		



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LOG NO: S0-05346
Received: 08 AUG 00
Reported: 27 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 180500927

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
05346-1	Carbon Column	08-04-00/15:30	SIL057

PARAMETER	05346-1
-----------	---------

Volatiles by GC/MS (8260)

Chloromethane, ug/l	100U
Bromomethane (Methyl bromide), ug/l	98U
Vinyl chloride, ug/l	100U
Chloroethane, ug/l	100U
Methylene chloride (Dichloromethane), ug/l	17JB
Acetone, ug/l	2900
Carbon disulfide, ug/l	1.4J
1,1-Dichloroethene, ug/l	50U
1,1-Dichloroethane, ug/l	50U
Cis/Trans-1,2-Dichloroethene, ug/l	50U
Chloroform, ug/l	50U
1,2-Dichloroethane, ug/l	50U
2-Butanone (MEK), ug/l	14J
1,1,1-Trichloroethane, ug/l	50U
Carbon tetrachloride, ug/l	50U
Bromodichloromethane, ug/l	50U
1,1,2,2-Tetrachloroethane, ug/l	50U
1,2-Dichloropropane, ug/l	50U
trans-1,3-Dichloropropene, ug/l	50U
Trichloroethene, ug/l	27U
Dibromochloromethane, ug/l	50U
1,1,2-Trichloroethane, ug/l	50U



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LOG NO: S0-05346
Received: 08 AUG 00
Reported: 27 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 180500927

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05346-1	Carbon Column		08-04-00/15:30	SIL057
PARAMETER		05346-1		
Benzene, ug/l	1.3J			
cis-1,3-Dichloropropene, ug/l	10U			
Bromoform, ug/l	50U			
2-Hexanone, ug/l	250U			
4-Methyl-2-pentanone (MIBK), ug/l	250U			
Tetrachloroethene, ug/l	50U			
Toluene, ug/l	14J			
Chlorobenzene, ug/l	50U			
Ethylbenzene, ug/l	1.6J			
Styrene, ug/l	50U			
Xylenes, Total, ug/l	5.9J			
Surrogate - Toluene-d8	96 ‰			
Surrogate - 4-Bromofluorobenzene	90 ‰			
Surrogate - Dibromofluoromethane	100 ‰			
Dilution Factor	10			
Analysis Date	08.18.00			
Batch ID	1A0818			
Chemical Oxygen Demand (410.4), mg/l	100			
Dilution Factor	1			
Prep Date	08.17.00			
Analysis Date	08.18.00			
Batch ID	0817A			



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LOG NO: S0-05346
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Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 180500927

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05346-1	Carbon Column		08-04-00/15:30	SIL057
PARAMETER		05346-1		
Total Organic Carbon (415.1), mg/l		21		
Dilution Factor		1		
Prep Date		08.08.00		
Analysis Date		08.08.00		
Batch ID		0808B		



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LOG NO: S0-05346
Received: 08 AUG 00
Reported: 27 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 180500927

REPORT OF RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05346-1	Carbon Column		08-04-00/15:30	SIL057
PARAMETER			05346-1	
<hr/>				
TCL Semivolatiles (8270)				
Phenol, ug/l		10U		
bis(2-Chloroethyl)ether, ug/l		10U		
2-Chlorophenol, ug/l		10U		
1,3-Dichlorobenzene, ug/l		10U		
1,4-Dichlorobenzene, ug/l		10U		
1,2-Dichlorobenzene, ug/l		10U		
2-Methylphenol (o-Cresol), ug/l		10U		
2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether), ug/l		10U		
3-Methylphenol/4-Methylphenol (m&p-Cresol), ug/l		10U		
N-Nitroso-di-n-propylamine, ug/l		10U		
Hexachloroethane, ug/l		1.9U		
Nitrobenzene, ug/l		3.5U		
Isophorone, ug/l		10U		
2-Nitrophenol, ug/l		10U		
bis(2-Chloroethoxy)methane, ug/l		10U		
2,4-Dichlorophenol, ug/l		10U		
1,2,4-Trichlorobenzene, ug/l		1.7J		
Naphthalene, ug/l		10U		
4-Chloroaniline, ug/l		20U		
Hexachlorobutadiene, ug/l		10U		
4-Chloro-3-methylphenol, ug/l		10U		
<hr/>				



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LOG NO: S0-05346
Received: 08 AUG 00
Reported: 27 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 180500927

Page 6

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05346-1	Carbon Column		08-04-00/15:30	SIL057
PARAMETER		05346-1		
2-Methylnaphthalene, ug/l		10U		
Hexachlorocyclopentadiene, ug/l		10U		
2,4,6-Trichlorophenol, ug/l		2.1U		
2,4,5-Trichlorophenol, ug/l		10U		
2-Chloronaphthalene, ug/l		10U		
2-Nitroaniline, ug/l		50U		
Dimethylphthalate, ug/l		10U		
Acenaphthylene, ug/l		10U		
3-Nitroaniline, ug/l		50U		
Acenaphthene, ug/l		10U		
2,4-Dinitrophenol, ug/l		14U		
4-Nitrophenol, ug/l		50U		
Dibenzofuran, ug/l		10U		
2,4-Dinitrotoluene, ug/l		10U		
2,6-Dinitrotoluene, ug/l		10U		
Diethylphthalate, ug/l		10U		
4-Chlorophenylphenyl ether, ug/l		10U		
Fluorene, ug/l		1.0U		
4-Nitroaniline, ug/l		50U		
4,6-Dinitro-2-methylphenol, ug/l		13U		
N-Nitrosodiphenylamine, ug/l		5.0U		
4-Bromophenylphenyl ether, ug/l		1.0U		
Hexachlorobenzene, ug/l		0.37J		



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Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 180500927

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE / TIME SAMPLED	SDG#
05346-1	Carbon Column	08-04-00/15:30	SIL057
PARAMETER	05346-1		
Pentachlorophenol, ug/l	5.0U		
Phenanthrene, ug/l	10U		
Anthracene, ug/l	10U		
Di-n-butylphthalate, ug/l	10U		
Fluoranthene, ug/l	10U		
Pyrene, ug/l	10U		
Butylbenzylphthalate, ug/l	10U		
3,3'-Dichlorobenzidine, ug/l	20U		
Benzo(a)anthracene, ug/l	10U		
bis(2-Ethylhexyl)phthalate, ug/l	0.52J		
Chrysene, ug/l	10U		
Di-n-octylphthalate, ug/l	10U		
Benzo(b)fluoranthene, ug/l	10U		
Benzo(k)fluoranthene, ug/l	10U		
Benzo(a)pyrene, ug/l	10U		
Indeno(1,2,3-cd)pyrene, ug/l	10U		
Dibenzo(a,h)anthracene, ug/l	10U		
Benzo(g,h,i)perylene, ug/l	10U		
Carbazole, ug/l	3.4U		
Surrogate - Phenol-d5	85 %		
Surrogate - 2-Fluorophenol	87 %		
Surrogate - 2,4,6-Tribromophenol	85 %		
Surrogate - Nitrobenzene - d5	84 %		



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Mr. Pat Campbell
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Client PO. No.: 4503148706
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Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 180500927

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05346-1	Carbon Column		08-04-00/15:30	SIL057
PARAMETER		05346-1		
Surrogate - 2-Fluorobiphenyl	86 %			
Surrogate - Terphenyl-d14	100 %			
Dilution Factor	1			
Prep Date	08.11.00			
Analysis Date	08.23.00			
Batch ID	0810B			
Chlorinated Herbicides (8151)				
2,4-D, ug/l	0.50U			
2,4-DB, ug/l	0.50U			
2,4,5-T, ug/l	0.50U			
2,4,5-TP (Silvex), ug/l	0.50U			
Dalapon, ug/l	120U			
Dicamba, ug/l	1.2U			
Dichloroprop, ug/l	6.0U			
Dinoseb, ug/l	6.0U			
MCPA[(4-chloro-2-methylphenoxy)-acetic acid], ug/l	120U			
MCPP[2-(4-chloro-2-methylphenoxy)-propanoic acid], ug/l	120U			
Pentachlorophenol, ug/l	1.0U			
Surrogate-DCAA	110 %			
Dilution Factor	1			
Prep Date	08.11.00			
Analysis Date	08.16.00			
Batch ID	0811N			



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LOG NO: S0-05346

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Mr. Pat Campbell
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201 Summit View Drive Third Floor
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Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 180500927

Page 9

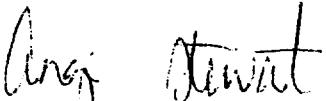
REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05346-1	Carbon Column		08-04-00/15:30	SIL057
PARAMETER			05346-1	

U = Analyzed for but not detected.

B (Organic) = This flag is used when the analyte is found in the associated method blank as well as in the sample.

J = The flag "J" indicates the presence of a compound that meets the identification criteria, but the result is less than the sample RL and greater than the MDL.


Angie Stewart, Project Manager



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRoche Avenue, Savannah, GA 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

Phone: (912) 354-7858 Fax: (912) 352-0165
 Phone: (850) 878-3994 Fax: (850) 878-9504
 Phone: (334) 666-6631 Fax: (334) 666-6696
 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE		PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSES					PAGE	OF		
Leachate Treatability		00523	TN		<input checked="" type="checkbox"/> Herbs	<input type="checkbox"/> TOC	<input type="checkbox"/> COD	<input type="checkbox"/> VOC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TEL/EMAIL PROJECT MANAGER	A Stewart	P.O. NUMBER	CONTRACT NO.		<input type="checkbox"/> Composite (C) OR GRAS (G) INDICATE	<input type="checkbox"/> AQUEOUS/WATER	<input type="checkbox"/> SOLID OR SEMI-SOLID	<input type="checkbox"/> AIR	<input type="checkbox"/> NONAQUEOUS, LIQUID (OIL, SOLVENT, ETC)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CLIENT NAME/PM	Pat Campbell	CLIENT PHONE	615-377-4775	CLIENT FAX	615-377-4976	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CLIENT NAME	The Advent Group	CLIENT EMAIL	J.Baltz@adventgroup.org		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
CLIENT ADDRESS	201 Summit View Dr, 3rdFL Brentwood, TN 37027					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COMPANY CONTRACTING THIS WORK (if applicable):													
SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION					NUMBER OF CONTAINERS SUBMITTED					REMARKS	
8/14/00	3:30	Carbon Column					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	b	1	1	3	
RELINQUISHED BY: (SIGNATURE)		DATE	TIME	RELINQUISHED BY: (SIGNATURE)		DATE	TIME	RELINQUISHED BY: (SIGNATURE)		DATE	TIME		
		7/20/00				8/17/00	5:30pm						
RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME		
LABORATORY USE ONLY													
RECEIVED BY LABORATORY BY:		DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL-SL LOG NO	LABORATORY REMARKS						
		8/18/00	8:40			5005346							



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LOG NO: S0-05713
Received: 22 AUG 00
Reported: 16 OCT 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

CC: MR. PAT CAMPBELL

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 152401018

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05713-1	CARBON COLUMN	08-17-00		SIL060
PARAMETER				
		05713-1		
Total Organic Carbon (415.1), mg/l		16		
Dilution Factor		1.0		
Prep Date		08.31.00		
Analysis Date		09.01.00		
Batch ID		0831B		



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LOG NO: S0-05713
Received: 22 AUG 00
Reported: 16 OCT 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

CC: MR. PAT CAMPBELL

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 152401018

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
05713-1	CARBON COLUMN	08-17-00	SIL060
PARAMETER			05713-1
TCL Pesticides (8081)			
alpha-BHC, ug/l			0.039U
beta-BHC, ug/l			0.014U
delta-BHC, ug/l			0.012U
gamma-BHC (Lindane), ug/l			0.019U
Heptachlor, ug/l			0.050U
Aldrin, ug/l			0.050U
Heptachlor epoxide, ug/l			0.050U
Endosulfan I, ug/l			0.050U
Dieldrin, ug/l			0.10U
4,4'-DDE, ug/l			0.10U
Endrin, ug/l			0.10U
Endrin aldehyde, ug/l			0.10U
Endosulfan II, ug/l			0.10U
4,4'-DDD, ug/l			0.10U
Endosulfan sulfate, ug/l			0.10U
4,4'-DDT, ug/l			0.10U
Endrin ketone, ug/l			0.10U
Methoxychlor, ug/l			0.50U
alpha-Chlordane, ug/l			0.050U
gamma-Chlordane, ug/l			0.050U
Toxaphene, ug/l			5.0U
Surrogate - DCB			60 %
Surrogate - 2,4,5,6-Tetrachloro-m-xylene (TCMX)			34 %
Dilution Factor			1
Prep Date			08.24.00
Analysis Date			09.18.00
Batch ID			0824R



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LOG NO: S0-05713
Received: 22 AUG 00
Reported: 16 OCT 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

CC: MR. PAT CAMPBELL

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 152401018

Page 3

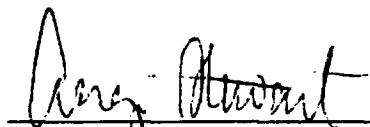
REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05713-1	CARBON COLUMN		08-17-00	SIL060

PARAMETER 05713-1

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III.



Angie Stewart, Project Manager

STZ
Savannah
Laboratories
 A Division of Enviro Test Laboratories, Inc.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

0000
 5102 LaRache Avenue, Savannah, GA 31401
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

Phone: (912) 354-7858 Fax: (912) 352-0165
 Phone: (850) 878-3091 Fax: (850) 878-9504
 Phone: (334) 606-6633 Fax: (334) 606-6696
 Phone: (813) 685-7427 Fax: (813) 685-7040

PROJECT REFERENCE Leachate Treatability	PROJECT NO DOS523	PROJECT LOCATION (STATE) TN	MATRIX TYPE	REQUIRED ANALYSES						PAGE 1	OF 1				
STL (LAB) PROJECT MANAGER A Stewart	P.O. NUMBER	CONTRACT NO.								STANDARD REPORT DELIVERY					
CLIENT SITE PM Pat Campbell	CLIENT PHONE 615-377-4775	CLIENT FAX 615-377-4976								DATE DUE					
CLIENT NAME The Advent Group	CLIENT EMAIL J.Baltz@adventgroup.org									EXPEDITED REPORT DELIVERY (SURCHARGE)	0				
CLIENT ADDRESS 201 Summit View Dr., 3rd Fl Brentwood, TN 37027												DATE DUE			
COMPANY CONTRACTING THIS WORK (if applicable)													NUMBER OF COOLERS SUBMITTED PER SHIPMENT	1	
SAMPLE DATE 8/20/00	SAMPLE IDENTIFICATION biochar Carbon Column			COMPOSITE (C) OR GRAB (G) / ACIDATE <input checked="" type="checkbox"/>	AQUEOUS (WATER) <input type="checkbox"/>	SOLID OR SEMI-SOLID <input type="checkbox"/>	AIR <input type="checkbox"/>	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC) <input type="checkbox"/>	Post-treatment TOC	- HCl	NUMBER OF CONTAINERS SUBMITTED				REMARKS
				X							2	1			
RELINQUISHED BY: (SIGNATURE) Stewart	DATE 7/20/00	TIME	RELINQUISHED BY: (SIGNATURE) Jason Baltz	DATE 8/21/00	TIME 5:30pm	RELINQUISHED BY: (SIGNATURE)				DATE	TIME				
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)				DATE	TIME				

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: C. Johnson	DATE 8/22/00	TIME 8:40	CUSTODY INTACT YES	CUSTODY SEAL NO.	STL-SL LOG NO. DO-D5713	LABORATORY REMARKS:
			NO			

ORIGINAL

/

4

ATTACHMENT 4

**ANALYTICAL DATA FOR CHEMICAL
PRECIPITATION JAR TESTS**





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LOG NO: S0-05135
Received: 01 AUG 00
Reported: 18 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 182300919

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-1	CHEM PRECIP PH7-LIME		07-28-00/12:00	SIL056
05135-2	CHEM PRECIP PH8-LIME		07-28-00/12:00	SIL056
05135-3	CHEM PRECIP PH9-LIME		07-28-00/12:00	SIL056
05135-4	CHEM PRECIP PH10-LIME		07-28-00/12:00	SIL056
05135-5	CHEM PRECIP PH11-LIME		07-28-00/12:00	SIL056
PARAMETER	05135-1	05135-2	05135-3	05135-4
Suspended Solids (160.2), mg/l	66	160	10	11
Dilution Factor	1	1	1	1
Prep Date	08.04.00	08.04.00	08.04.00	08.04.00
Analysis Date	08.07.00	08.07.00	08.07.00	08.07.00
Batch ID	0804A	0804A	0804A	0804A
Alkalinity (to pH 4.5) as CaCO ₃ (310.1), mg/l	1000	810	220	250
Dilution Factor	2	10	10	5
Prep Date	08.08.00	08.08.00	08.08.00	08.08.00
Analysis Date	08.08.00	08.08.00	08.08.00	08.08.00
Batch ID	0808A	0808A	0808A	0808A
pH (150.1), units	6.8	7.4	8.9	10
Prep Date	08.01.00	08.01.00	08.01.00	08.01.00
Analysis Date	08.01.00	08.01.00	08.01.00	08.01.00
Batch ID	0801A	0801A	0801A	0801A



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Mr. Pat Campbell
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Client PO. No.: 4503148706

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REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-1	CHEM PRECIP PH7-LIME	07-28-00/12:00	SIL056	
05135-2	CHEM PRECIP PH8-LIME	07-28-00/12:00	SIL056	
05135-3	CHEM PRECIP PH9-LIME	07-28-00/12:00	SIL056	
05135-4	CHEM PRECIP PH10-LIME	07-28-00/12:00	SIL056	
05135-5	CHEM PRECIP PH11-LIME	07-28-00/12:00	SIL056	
PARAMETER	05135-1	05135-2	05135-3	05135-4
Specific Conductance (120.1), umhos/cm	3700	3500	2500	2500
Dilution Factor	1	1	1	1
Prep Date	08.02.00	08.02.00	08.02.00	08.02.00
Analysis Date	08.02.00	08.02.00	08.02.00	08.02.00
Batch ID	0802B	0802B	0802B	0802B
Arsenic (6010)				
Arsenic, mg/l	0.0060B	0.0045B	0.0046B	0.0037B
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Aluminum (6010)				
Aluminum, mg/l	0.061B	0.20U	0.20U	0.20U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I



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Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-1	CHEM PRECIP PH7-LIME	07-28-00/12:00	SIL056	
05135-2	CHEM PRECIP PH8-LIME	07-28-00/12:00	SIL056	
05135-3	CHEM PRECIP PH9-LIME	07-28-00/12:00	SIL056	
05135-4	CHEM PRECIP PH10-LIME	07-28-00/12:00	SIL056	
05135-5	CHEM PRECIP PH11-LIME	07-28-00/12:00	SIL056	
PARAMETER	05135-1	05135-2	05135-3	05135-4
Antimony (6010)				05135-5
Antimony, mg/l	0.020U	0.020U	0.020U	0.020U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Barium (6010)				
Barium, mg/l	0.17	0.092	0.030	0.039
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Beryllium (6010)				
Beryllium, mg/l	0.0040U	0.0040U	0.0040U	0.0040U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I



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LOG NO: S0-05135
Received: 01 AUG 00
Reported: 18 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 182300919

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#		
05135-1	CHEM PRECIP PH7-LIME	07-28-00/12:00	SIL056			
05135-2	CHEM PRECIP PH8-LIME	07-28-00/12:00	SIL056			
05135-3	CHEM PRECIP PH9-LIME	07-28-00/12:00	SIL056			
05135-4	CHEM PRECIP PH10-LIME	07-28-00/12:00	SIL056			
05135-5	CHEM PRECIP PH11-LIME	07-28-00/12:00	SIL056			
PARAMETER		05135-1	05135-2	05135-3	05135-4	05135-5
Cadmium (6010)						
Cadmium, mg/l	0.0016B	0.0050U	0.0050U	0.0050U	0.0050U	
Dilution Factor	1	1	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00	08.15.00	
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00	08.22.00	
Batch ID	0815I	0815I	0815I	0815I	0815I	
Calcium (6010)						
Calcium, mg/l	680E	600E	230E	350E	400E	
Dilution Factor	1	1	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00	08.15.00	
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00	08.22.00	
Batch ID	0815I	0815I	0815I	0815I	0815I	
Chromium (6010)						
Chromium, mg/l	0.28	0.20	0.069	0.015	0.014	
Dilution Factor	1	1	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00	08.15.00	
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00	08.22.00	
Batch ID	0815I	0815I	0815I	0815I	0815I	



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Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 182300919

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-1	CHEM PRECIP PH7-LIME		07-28-00/12:00	SIL056
05135-2	CHEM PRECIP PH8-LIME		07-28-00/12:00	SIL056
05135-3	CHEM PRECIP PH9-LIME		07-28-00/12:00	SIL056
05135-4	CHEM PRECIP PH10-LIME		07-28-00/12:00	SIL056
05135-5	CHEM PRECIP PH11-LIME		07-28-00/12:00	SIL056
PARAMETER	05135-1	05135-2	05135-3	05135-4
Cobalt (6010)				
Cobalt, mg/l	0.26	0.12	0.0090B	0.0039B
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Copper (6010)				
Copper, mg/l	0.0052B	0.0012B	0.020U	0.0017B
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Iron (6010)				
Iron, mg/l	53	15	0.65	0.085
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I



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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-1	CHEM PRECIP PH7-LIME	07-28-00/12:00	SIL056	
05135-2	CHEM PRECIP PH8-LIME	07-28-00/12:00	SIL056	
05135-3	CHEM PRECIP PH9-LIME	07-28-00/12:00	SIL056	
05135-4	CHEM PRECIP PH10-LIME	07-28-00/12:00	SIL056	
05135-5	CHEM PRECIP PH11-LIME	07-28-00/12:00	SIL056	
PARAMETER	05135-1	05135-2	05135-3	05135-4
Potassium (6010)				
Potassium, mg/l	30	34	32	32
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Lead (6010)				
Lead, mg/l	0.0030B	0.0050U	0.0050U	0.0050U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Magnesium (6010)				
Magnesium, mg/l	74	74	64	6.3
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I



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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-1	CHEM PRECIP PH7-LIME	07-28-00/12:00	SIL056	
05135-2	CHEM PRECIP PH8-LIME	07-28-00/12:00	SIL056	
05135-3	CHEM PRECIP PH9-LIME	07-28-00/12:00	SIL056	
05135-4	CHEM PRECIP PH10-LIME	07-28-00/12:00	SIL056	
05135-5	CHEM PRECIP PH11-LIME	07-28-00/12:00	SIL056	
PARAMETER	05135-1	05135-2	05135-3	05135-4
Manganese (6010)				05135-5
Manganese, mg/l	3.1	0.80	0.028	0.0065B
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Molybdenum (6010)				
Molybdenum, mg/l	0.044	0.038	0.037	0.034
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Mercury (7470)				
Mercury, mg/l	0.00020U	0.00020U	0.00020U	0.00020U
Dilution Factor	1	1	1	1
Prep Date	08.11.00	08.11.00	08.11.00	08.11.00
Analysis Date	08.12.00	08.12.00	08.12.00	08.12.00
Batch ID	0811V	0811V	0811V	0811V



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05135-1	CHEM PRECIP PH7-LIME	07-28-00/12:00	SIL056
05135-2	CHEM PRECIP PH8-LIME	07-28-00/12:00	SIL056
05135-3	CHEM PRECIP PH9-LIME	07-28-00/12:00	SIL056
05135-4	CHEM PRECIP PH10-LIME	07-28-00/12:00	SIL056
05135-5	CHEM PRECIP PH11-LIME	07-28-00/12:00	SIL056
PARAMETER	05135-1	05135-2	05135-3
Nickel (6010)			
Nickel, mg/l	0.070	0.055	0.032B
Dilution Factor	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I
Selenium (6010)	05135-4	05135-5	
Selenium, mg/l	0.0046B	0.010U	0.010U
Dilution Factor	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I
Silver (6010)	05135-4	05135-5	
Silver, mg/l	0.010U	0.010U	0.010U
Dilution Factor	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I



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05135-1	CHEM PRECIP PH7-LIME		07-28-00/12:00	SIL056
05135-2	CHEM PRECIP PH8-LIME		07-28-00/12:00	SIL056
05135-3	CHEM PRECIP PH9-LIME		07-28-00/12:00	SIL056
05135-4	CHEM PRECIP PH10-LIME		07-28-00/12:00	SIL056
05135-5	CHEM PRECIP PH11-LIME		07-28-00/12:00	SIL056
PARAMETER	05135-1	05135-2	05135-3	05135-4
Sodium (6010)				05135-5
Sodium, mg/l	210	220	210	220
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Thallium (6010)				
Thallium, mg/l	0.010U	0.010U	0.010U	0.010U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Vanadium (6010)				
Vanadium, mg/l	0.011	0.0026B	0.010U	0.010U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-1	CHEM PRECIP PH7-LIME	07-28-00/12:00	SIL056	
05135-2	CHEM PRECIP PH8-LIME	07-28-00/12:00	SIL056	
05135-3	CHEM PRECIP PH9-LIME	07-28-00/12:00	SIL056	
05135-4	CHEM PRECIP PH10-LIME	07-28-00/12:00	SIL056	
05135-5	CHEM PRECIP PH11-LIME	07-28-00/12:00	SIL056	
PARAMETER	05135-1	05135-2	05135-3	05135-4
Zinc (6010)				05135-5
Zinc, mg/l	0.38	0.022	0.020U	0.020U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.25.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-6	CHEM PRECIP PH7-CAUSTIC	07-28-00/14:00	SIL056	
05135-7	CHEM PRECIP PH8-CAUSTIC	07-28-00/14:00	SIL056	
05135-8	CHEM PRECIP PH9-CAUSTIC	07-28-00/14:00	SIL056	
05135-9	CHEM PRECIP PH10-CAUSTIC	07-28-00/14:00	SIL056	
05135-10	CHEM PRECIP PH11-CAUSTIC	07-28-00/14:00	SIL056	
PARAMETER	05135-6	05135-7	05135-8	05135-9
Suspended Solids (160.2), mg/l	14	62	17	22
Dilution Factor	1	1	1	1
Prep Date	08.04.00	08.04.00	08.04.00	08.04.00
Analysis Date	08.07.00	08.07.00	08.07.00	08.07.00
Batch ID	0804A	0804A	0804A	0804A
Alkalinity (to pH 4.5) as CaCO ₃ (310.1), mg/l	1100	1100	980	1200
Dilution Factor	5	10	10	10
Prep Date	08.08.00	08.08.00	08.08.00	08.08.00
Analysis Date	08.08.00	08.08.00	08.08.00	08.08.00
Batch ID	0808A	0808A	0808A	0808A
pH (150.1), units	6.9	7.5	7.8	9.7
Prep Date	08.01.00	08.01.00	08.01.00	08.01.00
Analysis Date	08.01.00	08.01.00	08.01.00	08.01.00
Batch ID	0801A	0801A	0801A	0801A



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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-6	CHEM PRECIP PH7-CAUSTIC	07-28-00/14:00	SIL056	
05135-7	CHEM PRECIP PH8-CAUSTIC	07-28-00/14:00	SIL056	
05135-8	CHEM PRECIP PH9-CAUSTIC	07-28-00/14:00	SIL056	
05135-9	CHEM PRECIP PH10-CAUSTIC	07-28-00/14:00	SIL056	
05135-10	CHEM PRECIP PH11-CAUSTIC	07-28-00/14:00	SIL056	
PARAMETER	05135-6	05135-7	05135-8	05135-9
Specific Conductance (120.1), umhos/cm	3700	48000	3800	49000
Dilution Factor	1	10	1	10
Prep Date	08.02.00	08.02.00	08.02.00	08.02.00
Analysis Date	08.02.00	08.02.00	08.02.00	08.02.00
Batch ID	0802B	0802B	0802B	0802B
Arsenic (6010)				
Arsenic, mg/l	0.0058B	0.0044B	0.0034B	0.0056B
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Aluminum (6010)				
Aluminum, mg/l	0.20U	0.20U	0.20U	0.20U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I



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05135-6	CHEM PRECIP PH7-CAUSTIC	07-28-00/14:00	SIL056	
05135-7	CHEM PRECIP PH8-CAUSTIC	07-28-00/14:00	SIL056	
05135-8	CHEM PRECIP PH9-CAUSTIC	07-28-00/14:00	SIL056	
05135-9	CHEM PRECIP PH10-CAUSTIC	07-28-00/14:00	SIL056	
05135-10	CHEM PRECIP PH11-CAUSTIC	07-28-00/14:00	SIL056	
PARAMETER	05135-6	05135-7	05135-8	05135-9
Antimony (6010)				05135-10
Antimony, mg/l	0.020U	0.020U	0.020U	0.020U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Barium (6010)				
Barium, mg/l	0.17	0.15	0.062	0.0093B
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Beryllium (6010)				
Beryllium, mg/l	0.0040U	0.0040U	0.0040U	0.0040U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I



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05135-6	CHEM PRECIP PH7-CAUSTIC	07-28-00/14:00	SIL056
05135-7	CHEM PRECIP PH8-CAUSTIC	07-28-00/14:00	SIL056
05135-8	CHEM PRECIP PH9-CAUSTIC	07-28-00/14:00	SIL056
05135-9	CHEM PRECIP PH10-CAUSTIC	07-28-00/14:00	SIL056
05135-10	CHEM PRECIP PH11-CAUSTIC	07-28-00/14:00	SIL056

PARAMETER	05135-6	05135-7	05135-8	05135-9	05135-10
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Cadmium (6010)					
Cadmium, mg/l	0.0012B	0.0050U	0.0050U	0.0050U	0.0050U
Dilution Factor	1	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I	0815I

Calcium (6010)					
Calcium, mg/l	500E	480E	230E	68E	57E
Dilution Factor	1	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I	0815I

Chromium (6010)					
Chromium, mg/l	0.28	0.22	0.16	0.15	0.060
Dilution Factor	1	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I	0815I



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05135-6	CHEM PRECIP PH7-CAUSTIC	07-28-00/14:00	SIL056	
05135-7	CHEM PRECIP PH8-CAUSTIC	07-28-00/14:00	SIL056	
05135-8	CHEM PRECIP PH9-CAUSTIC	07-28-00/14:00	SIL056	
05135-9	CHEM PRECIP PH10-CAUSTIC	07-28-00/14:00	SIL056	
05135-10	CHEM PRECIP PH11-CAUSTIC	07-28-00/14:00	SIL056	
PARAMETER	05135-6	05135-7	05135-8	05135-9
Cobalt (6010)				05135-10
Cobalt, mg/l	0.28	0.17	0.039	0.0083B
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Copper (6010)				
Copper, mg/l	0.0013B	0.0015B	0.0011B	0.00094B
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Iron (6010)				
Iron, mg/l	61	30	2.7	0.29
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I



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LOG NO: S0-05135
Received: 01 AUG 00
Reported: 18 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 182300919

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-6	CHEM PRECIP PH7-CAUSTIC	07-28-00/14:00	SIL056	
05135-7	CHEM PRECIP PH8-CAUSTIC	07-28-00/14:00	SIL056	
05135-8	CHEM PRECIP PH9-CAUSTIC	07-28-00/14:00	SIL056	
05135-9	CHEM PRECIP PH10-CAUSTIC	07-28-00/14:00	SIL056	
05135-10	CHEM PRECIP PH11-CAUSTIC	07-28-00/14:00	SIL056	
PARAMETER	05135-6	05135-7	05135-8	05135-9
Potassium (6010)				05135-10
Potassium, mg/l	36	37	38	39
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Lead (6010)				
Lead, mg/l	0.0050U	0.0050U	0.0050U	0.0050U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Magnesium (6010)				
Magnesium, mg/l	76	73	68	48
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I



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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-6	CHEM PRECIP PH7-CAUSTIC	07-28-00/14:00	SIL056	
05135-7	CHEM PRECIP PH8-CAUSTIC	07-28-00/14:00	SIL056	
05135-8	CHEM PRECIP PH9-CAUSTIC	07-28-00/14:00	SIL056	
05135-9	CHEM PRECIP PH10-CAUSTIC	07-28-00/14:00	SIL056	
05135-10	CHEM PRECIP PH11-CAUSTIC	07-28-00/14:00	SIL056	
PARAMETER	05135-6	05135-7	05135-8	05135-9
Manganese (6010)				05135-10
Manganese, mg/l	3.3	3.0	0.74	0.093
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Molybdenum (6010)				
Molybdenum, mg/l	0.039	0.039	0.037	0.037
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Mercury (7470)				
Mercury, mg/l	0.00020U	0.00020U	0.00020U	0.00020U
Dilution Factor	1	1	1	1
Prep Date	08.11.00	08.11.00	08.11.00	08.11.00
Analysis Date	08.12.00	08.12.00	08.12.00	08.12.00
Batch ID	0811V	0811V	0811V	0811V



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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-6	CHEM PRECIP PH7-CAUSTIC	07-28-00/14:00	SIL056	
05135-7	CHEM PRECIP PH8-CAUSTIC	07-28-00/14:00	SIL056	
05135-8	CHEM PRECIP PH9-CAUSTIC	07-28-00/14:00	SIL056	
05135-9	CHEM PRECIP PH10-CAUSTIC	07-28-00/14:00	SIL056	
05135-10	CHEM PRECIP PH11-CAUSTIC	07-28-00/14:00	SIL056	
PARAMETER	05135-6	05135-7	05135-8	05135-9
Nickel (6010)				05135-10
Nickel, mg/l	0.068	0.048	0.032B	0.026B
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Selenium (6010)				
Selenium, mg/l	0.010U	0.010U	0.0058B	0.010U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Silver (6010)				
Silver, mg/l	0.010U	0.010U	0.010U	0.010U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I



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05135-7	CHEM PRECIP PH8-CAUSTIC	07-28-00/14:00	SIL056	
05135-8	CHEM PRECIP PH9-CAUSTIC	07-28-00/14:00	SIL056	
05135-9	CHEM PRECIP PH10-CAUSTIC	07-28-00/14:00	SIL056	
05135-10	CHEM PRECIP PH11-CAUSTIC	07-28-00/14:00	SIL056	
PARAMETER	05135-6	05135-7	05135-8	05135-9
Sodium (6010)				05135-10
Sodium, mg/l	340	480	660	930
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Thallium (6010)				
Thallium, mg/l	0.010U	0.010U	0.010U	0.010U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I
Vanadium (6010)				
Vanadium, mg/l	0.0066B	0.0034B	0.010U	0.010U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I



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05135-7	CHEM PRECIP PH8-CAUSTIC	07-28-00/14:00	SIL056	
05135-8	CHEM PRECIP PH9-CAUSTIC	07-28-00/14:00	SIL056	
05135-9	CHEM PRECIP PH10-CAUSTIC	07-28-00/14:00	SIL056	
05135-10	CHEM PRECIP PH11-CAUSTIC	07-28-00/14:00	SIL056	
PARAMETER	05135-6	05135-7	05135-8	05135-9
Zinc (6010)				05135-10
Zinc, mg/l	0.52	0.098	0.0081B	0.020U
Dilution Factor	1	1	1	1
Prep Date	08.15.00	08.15.00	08.15.00	08.15.00
Analysis Date	08.22.00	08.22.00	08.22.00	08.22.00
Batch ID	0815I	0815I	0815I	0815I



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05135-11	CONTROL-LIME	07-28-00/15:30	SIL056	
05135-12	CONTROL-CAUSTIC	07-28-00/15:30	SIL056	
PARAMETER		05135-11	05135-12	
Suspended Solids (160.2), mg/l		110	5.0U	
Dilution Factor		1	1	
Prep Date	08.04.00	08.04.00		
Analysis Date	08.07.00	08.07.00		
Batch ID	0804A	0804A		
Alkalinity (to pH 4.5) as CaCO ₃ (310.1), mg/l	2700	2000		
Dilution Factor	10	10		
Prep Date	08.08.00	08.08.00		
Analysis Date	08.08.00	08.08.00		
Batch ID	0808A	0808A		
pH (150.1), units	12	12		
Prep Date	08.01.00	08.01.00		
Analysis Date	08.01.00	08.01.00		
Batch ID	0801A	0801A		
Specific Conductance (120.1), umhos/cm	8.3	8.2		
Dilution Factor	1	1		
Prep Date	08.02.00	08.02.00		
Analysis Date	08.02.00	08.02.00		
Batch ID	0802C	0802C		



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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-11	CONTROL-LIME		07-28-00/15:30	SIL056
05135-12	CONTROL-CAUSTIC		07-28-00/15:30	SIL056
PARAMETER		05135-11	05135-12	
Arsenic (6010)				
Arsenic, mg/l		0.010U	0.010U	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	
Aluminum (6010)				
Aluminum, mg/l		0.29	0.20U	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	
Antimony (6010)				
Antimony, mg/l		0.020U	0.020U	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	



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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-11	CONTROL-LIME	07-28-00/15:30	SIL056	
05135-12	CONTROL-CAUSTIC	07-28-00/15:30	SIL056	
PARAMETER		05135-11	05135-12	
Barium (6010)				
Barium, mg/l		0.0045B	0.010U	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	
Beryllium (6010)				
Beryllium, mg/l		0.0040U	0.0040U	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	
Cadmium (6010)				
Cadmium, mg/l		0.0050U	0.0050U	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-11	CONTROL-LIME		07-28-00/15:30	SIL056
05135-12	CONTROL-CAUSTIC		07-28-00/15:30	SIL056
PARAMETER		05135-11	05135-12	
Calcium (6010)				
Calcium, mg/l		930E	0.50UE	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	
Chromium (6010)				
Chromium, mg/l		0.012	0.010U	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	
Cobalt (6010)				
Cobalt, mg/l		0.010U	0.010U	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	



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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-11	CONTROL-LIME	07-28-00/15:30	SIL056	
05135-12	CONTROL-CAUSTIC	07-28-00/15:30	SIL056	
PARAMETER		05135-11	05135-12	
Copper (6010)				
Copper, mg/l		0.0025B	0.0016B	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	
Iron (6010)				
Iron, mg/l		0.47	0.034B	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	
Potassium (6010)				
Potassium, mg/l		0.22B	0.23B	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	



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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-11	CONTROL-LIME	07-28-00/15:30	SIL056	
05135-12	CONTROL-CAUSTIC	07-28-00/15:30	SIL056	
PARAMETER		05135-11	05135-12	
Lead (6010)				
Lead, mg/l		0.0050U	0.0050U	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	
Magnesium (6010)				
Magnesium, mg/l		2.3	0.50U	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	
Manganese (6010)				
Manganese, mg/l		0.021	0.010U	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	



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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-11	CONTROL-LIME	07-28-00/15:30	SIL056	
05135-12	CONTROL-CAUSTIC	07-28-00/15:30	SIL056	
PARAMETER		05135-11	05135-12	
Molybdenum (6010)				
Molybdenum, mg/l		0.010U	0.010U	
Dilution Factor		1	1	
Prep Date	08.15.00	08.15.00		
Analysis Date	08.22.00	08.22.00		
Batch ID	0815I	0815I		
Mercury (7470)				
Mercury, mg/l		0.00020U	0.00020U	
Dilution Factor		1	1	
Prep Date	08.11.00	08.11.00		
Analysis Date	08.12.00	08.12.00		
Batch ID	0811V	0811V		
Nickel (6010)				
Nickel, mg/l		0.040U	0.040U	
Dilution Factor		1	1	
Prep Date	08.15.00	08.15.00		
Analysis Date	08.22.00	08.22.00		
Batch ID	0815I	0815I		



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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-11	CONTROL-LIME	07-28-00/15:30	SIL056	
05135-12	CONTROL-CAUSTIC	07-28-00/15:30	SIL056	
PARAMETER		05135-11	05135-12	
Selenium (6010)				
Selenium, mg/l		0.010U	0.010U	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	
Silver (6010)				
Silver, mg/l		0.010U	0.010U	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	
Sodium (6010)				
Sodium, mg/l		0.81	870	
Dilution Factor		1	1	
Prep Date		08.15.00	08.15.00	
Analysis Date		08.22.00	08.22.00	
Batch ID		0815I	0815I	



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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE /	TIME SAMPLED	SDG#
05135-11	CONTROL-LIME	07-28-00/15:30	SIL056	
05135-12	CONTROL-CAUSTIC	07-28-00/15:30	SIL056	
PARAMETER		05135-11	05135-12	
Thallium (6010)				
Thallium, mg/l		0.010U	0.010U	
Dilution Factor		1	1	
Prep Date	08.15.00	08.15.00		
Analysis Date	08.22.00	08.22.00		
Batch ID	0815I	0815I		
Vanadium (6010)				
Vanadium, mg/l		0.010U	0.010U	
Dilution Factor		1	1	
Prep Date	08.15.00	08.15.00		
Analysis Date	08.22.00	08.22.00		
Batch ID	0815I	0815I		
Zinc (6010)				
Zinc, mg/l		0.017B	0.020U	
Dilution Factor		1	1	
Prep Date	08.15.00	08.15.00		
Analysis Date	08.22.00	08.22.00		
Batch ID	0815I	0815I		



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LOG NO: S0-05135
Received: 01 AUG 00
Reported: 18 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 182300919

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-13	CHEM PRECIP PH7 SLUDGE-LIME		07-28-00/12:00	SIL056
05135-14	CHEM PRECIP PH8 SLUDGE-LIME		07-28-00/12:00	SIL056
05135-15	CHEM PRECIP PH9 SLUDGE-LIME		07-28-00/12:00	SIL056
05135-16	CHEM PRECIP PH10 SLUDGE-LIME		07-28-00/12:00	SIL056
05135-17	CHEM PRECIP PH11 SLUDGE-LIME		07-28-00/12:00	SIL056
PARAMETER	05135-13	05135-14	05135-15	05135-16
Suspended Solids (160.2), mg/l	4400	6900	39000	22000
Dilution Factor	1	1	1	1
Prep Date	08.04.00	08.04.00	08.04.00	08.04.00
Analysis Date	08.07.00	08.07.00	08.07.00	08.07.00
Batch ID	0804A	0804A	0804A	0804A



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LOG NO: S0-05135
Received: 01 AUG 00
Reported: 18 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 182300919

REPORT OF RESULTS

Page 31

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-18	CHEM PRECIP PH7 SLUDGE-CAUSTIC	07-28-00/14:00	SIL056	
05135-19	CHEM PRECIP PH8 SLUDGE-CAUSTIC	07-28-00/14:00	SIL056	
05135-20	CHEM PRECIP PH9 SLUDGE-CAUSTIC	07-28-00/14:00	SIL056	
05135-21	CHEM PRECIP PH10 SLUDGE-CAUSTIC	07-28-00/14:00	SIL056	
05135-22	CHEM PRECIP PH11 SLUDGE-CAUSTIC	07-28-00/14:00	SIL056	
PARAMETER	05135-18	05135-19	05135-20	05135-21
Suspended Solids (160.2), mg/l	2000	5000	7500	520
Dilution Factor	1	1	1	1
Prep Date	08.04.00	08.04.00	08.04.00	08.04.00
Analysis Date	08.07.00	08.07.00	08.07.00	08.07.00
Batch ID	0804A	0804A	0804A	0804B



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LOG NO: S0-05135

Received: 01 AUG 00

Reported: 18 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 182300919

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-23	CONTROL BLANK		07-28-00/15:30	SIL056
PARAMETER		05135-23		
Arsenic (6010)				
Arsenic, mg/l		0.010U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		
Aluminum (6010)				
Aluminum, mg/l		0.20U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		
Antimony (6010)				
Antimony, mg/l		0.020U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		



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LOG NO: S0-05135

Received: 01 AUG 00

Reported: 18 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 182300919

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-23	CONTROL BLANK		07-28-00/15:30	SIL056
PARAMETER		05135-23		
Barium (6010)				
Barium, mg/l		0.010U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		
Beryllium (6010)				
Beryllium, mg/l		0.0040U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		
Cadmium (6010)				
Cadmium, mg/l		0.0050U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		



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LOG NO: S0-05135
Received: 01 AUG 00
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Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 182300919

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE /	TIME SAMPLED	SDG#
05135-23	CONTROL BLANK		07-28-00/15:30	SIL056
PARAMETER		05135-23		
Calcium (6010)				
Calcium, mg/l		0.50UE		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		
Chromium (6010)				
Chromium, mg/l		0.010U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		
Cobalt (6010)				
Cobalt, mg/l		0.010U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		



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LOG NO: S0-05135

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Mr. Pat Campbell
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201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 182300919

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-23	CONTROL BLANK		07-28-00/15:30	SIL056
PARAMETER		05135-23		
Copper (6010)				
Copper, mg/l	0.020U			
Dilution Factor	1			
Prep Date	08.15.00			
Analysis Date	08.22.00			
Batch ID	0815I			
Iron (6010)				
Iron, mg/l	0.050U			
Dilution Factor	1			
Prep Date	08.15.00			
Analysis Date	08.22.00			
Batch ID	0815I			
Potassium (6010)				
Potassium, mg/l	1.0U			
Dilution Factor	1			
Prep Date	08.15.00			
Analysis Date	08.22.00			
Batch ID	0815I			



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LOG NO: S0-05135
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Mr. Pat Campbell
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Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 182300919

REPORT OF RESULTS

Page 36

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-23	CONTROL BLANK		07-28-00/15:30	SIL056
PARAMETER		05135-23		
Lead (6010)				
Lead, mg/l	0.0050U			
Dilution Factor	1			
Prep Date	08.15.00			
Analysis Date	08.22.00			
Batch ID	0815I			
Magnesium (6010)				
Magnesium, mg/l	0.50U			
Dilution Factor	1			
Prep Date	08.15.00			
Analysis Date	08.22.00			
Batch ID	0815I			
Manganese (6010)				
Manganese, mg/l	0.010U			
Dilution Factor	1			
Prep Date	08.15.00			
Analysis Date	08.22.00			
Batch ID	0815I			



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LOG NO: S0-05135

Received: 01 AUG 00

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Mr. Pat Campbell
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Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 182300919

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-23	CONTROL BLANK		07-28-00/15:30	SIL056
PARAMETER				
		05135-23		
Molybdenum (6010)				
Molybdenum, mg/l		0.010U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		
Mercury (7470)				
Mercury, mg/l		0.00020U		
Dilution Factor		1		
Prep Date		08.11.00		
Analysis Date		08.12.00		
Batch ID		0811V		
Nickel (6010)				
Nickel, mg/l		0.040U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		



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LOG NO: S0-05135
Received: 01 AUG 00
Reported: 18 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 182300919

REPORT OF RESULTS

Page 38

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-23	CONTROL BLANK		07-28-00/15:30	SIL056
PARAMETER		05135-23		
Selenium (6010)				
Selenium, mg/l		0.010U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		
Silver (6010)				
Silver, mg/l		0.010U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		
Sodium (6010)				
Sodium, mg/l		0.50U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		



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LOG NO: S0-05135
Received: 01 AUG 00
Reported: 18 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 182300919

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05135-23	CONTROL BLANK		07-28-00/15:30	SIL056
PARAMETER		05135-23		
Thallium (6010)				
Thallium, mg/l		0.010U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		
Vanadium (6010)				
Vanadium, mg/l		0.010U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		
Zinc (6010)				
Zinc, mg/l		0.020U		
Dilution Factor		1		
Prep Date		08.15.00		
Analysis Date		08.22.00		
Batch ID		0815I		



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LOG NO: SO-05135
Received: 01 AUG 00
Reported: 18 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 182300919

REPORT OF RESULTS

DATE /

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05135-23	CONTROL BLANK	07-28-00/15:30	SIL056
PARAMETER		05135-23	

SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIIA, IIIB, and III.

U = Analyzed for but not detected.

B (Inorganic) = This flag indicates the reported value was obtained from a reading that was less than the Project Reporting Limits but greater than or equal to the Method Detection Limit (MDL).

This flag indicates the reported value is estimated because of the presence of interference.

Angie Stewart, Project Manager



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRoche Avenue, Savannah, GA 31404
 Phone: (912) 354-7858 Fax: (912) 352-0165
 2610 Industrial Plaza Drive, Tallahassee, FL 32301
 Phone: (850) 878-3994 Fax: (850) 878-9504
 900 Lakeside Drive, Mobile, AL 36693
 Phone: (334) 666-6633 Fax: (334) 666-6696
 c/o 712 Benjamin Rd., Suite 100, Tampa, FL 33634
 Phone: (813) 865-7427 Fax: (813) 865-7049

PROJECT REFERENCE <i>Wastewater treatability</i>	PROJECT NO. 00523	PROJECT LOCATION (STATE) <i>TN</i>	MATRIX TYPE	REQUIRED ANALYSES				PAGE 2	OF 2
CHIEF LABORATORY MANAGER <i>A Stewart</i>	P.O. NUMBER	CONTRACT NO.						STANDARD REPORT DELIVERY	
CLIENT NAME <i>Tom Campbell</i>	CLIENT PHONE 615-377-4775	CLIENT FAX 615-377-4971						DATE DUE	
CLIENT EMAIL								EXPEDITED REPORT DELIVERY (DURCHARGE)	
CLIENT ADDRESS <i>201 Summit View Dr. 3rd Flr, Brentwood, TN 37027</i>								DATE DUE	
COMPANY CONTRACTING THIS WORK (if applicable):								NUMBER OF COOLERS SUBMITTED PER SHIPMENT	
SAMPLE DATE	SAMPLE IDENTIFICATION TIME	NUMBER OF CONTAINERS SUBMITTED				REMARKS			
7/28	2:00 chem precip pH 8 - caustic	X	1	1					
7/28	2:00 chem precip pH 3 sludge - caustic	X		1	1				
7/28	2:00 chem precip pH 9 - caustic	X	1	1					
7/28	2:00 chem precip pH 9 sludge - caustic	X		1	1				
7/28	2:00 chem precip pH 10 - caustic	X	1	1					
7/28	2:00 chem precip pH 10 sludge - caustic	X		1	1				
7/28	2:00 chem precip pH 11 - caustic	X	1	1					
7/28	2:00 chem precip pH 11 sludge - caustic	X		1	1				
7/28	3:30 control - lime	X	1	1					
7/28	3:30 control - caustic	X	1	1					
7/28	3:30 control - blank	X	1						
RELINQUISHED BY: (SIGNATURE) <i>J. S.</i>	DATE 7/20/00	TIME	RELINQUISHED BY: (SIGNATURE) <i>Jason Batty</i>	DATE 7/31/00	TIME 5:30pm	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE) <i>J. S.</i>	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	
LABORATORY USE ONLY									
RECEIVED BY: (SIGNATURE) <i>J. S.</i>	DATE 8/1/00	TIME 8:35	CUSTODY INTACT YES / NO	CUSTODY SEAL NO.	STL 51 LOG NO. 50-05135	LABORATORY REMARKS			

ORIGINAL



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRoche Avenue, Savannah, GA 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

Phone: (912) 354-7858 Fax: (912) 352 0165
 Phone: (850) 878-3994 Fax: (850) 878-9504
 Phone: (334) 666-6633 Fax: (334) 666-6696
 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE <i>Lagoon Treatment</i>	PROJECT NO 00523	PROJECT LOCATION (STATE) TN	MATRIX TYPE	REQUIRED ANALYSES						PAGE 1	OF 2			
STL (LAB) PROJECT MANAGER <i>A. Stewart</i>	P.O. NUMBER	CONTRACT NO							STANDARD REPORT DELIVERY					
CLIENT NAME <i>Pat Campbell</i>	CLIENT PHONE 615-377-4775	CLIENT FAX 615-377-4976							DATE DUE					
CLIENT EMAIL							EXPEDITED REPORT DELIVERY (SURCHARGE)							
CLIENT ADDRESS 201 Summitt View Dr, 3rd floor Brentwood, TN 37027							DATE DUE							
COMPANY CONTRACTING THIS WORK (if applicable):														
SAMPLE	SAMPLE IDENTIFICATION			COMPOSITE (G) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMI-SOLID	AIR	HOMOGENEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED				REMARKS	
DATE	TIME			X		X		X	1	1				
7/28	12:00	chem precip pH 7-Lime		X		X		X	1	1				
7/28	12:00	chem precip pH 7 sludge - Lime		X		X		X		1				
7/28	12:00	chem precip pH 8 - Lime		X		X		X	1	1				
7/28	12:00	chem precip pH 8 sludge - Lime		X		X		X		1				
7/28	12:00	chem precip pH 9 - Lime		X		X		X	1	1				
7/28	12:00	chem precip pH 9 sludge - Lime		X		X		X		1				
7/28	12:00	chem precip pH 10 - Lime		X		X		X	1	1				
7/28	12:00	chem precip pH 10 sludge - Lime		X		X		X		1				
7/28	12:00	chem precip pH 11 - Lime		X		X		X	1	1				
7/28	12:00	chem precip pH 11 sludge - Lime		X		X		X		1				
7/28	2:00	chem precip pH 7 - Caustic		X		X		X	1	1				
7/28	2:00	chem precip pH 7 sludge - caustic		X		X		X		1				
RELINQUISHED BY: (SIGNATURE) <i>Edm</i>	DATE 7/20/00	TIME	RELINQUISHED BY: (SIGNATURE) <i>Jason Bailey</i>	DATE 7/31/00	TIME 5:30pm	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: <i>R. J. Bailey</i>	DATE 8/1/00	TIME 8:35	CUSTODY INTACT YES	CUSTODY SEAL NO.	STL-SL LOG NO. 00-05135	LABORATORY REMARKS:
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ORIGINAL

ATTACHMENT 5

**ANALYTICAL DATA FOR ACTIVATED
SLUDGE BATCH TESTS**





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LOG NO: S0-05521
Received: 15 AUG 00
Reported: 25 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 161500925

Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521-1	BioBatch1-T=0	08-08-00		SIL058
05521-2	BioBatch2-T=0	08-08-00		SIL058
05521-3	BioBatch3-T=0	08-08-00		SIL058
05521-4	BioBatch1-T=1	08-08-00		SIL058
05521-5	BioBatch2-T=1	08-08-00		SIL058
PARAMETER	05521-1	05521-2	05521-3	05521-4
Chemical Oxygen Demand (410.4), mg/l	530	490	470	510
Dilution Factor	1	1	1	1
Prep Date	08.23.00	08.23.00	08.23.00	08.23.00
Analysis Date	08.24.00	08.24.00	08.24.00	08.24.00
Batch ID	0823A	0823A	0823A	0823A
Total Organic Carbon (415.1), mg/l	170	170	160	170
Dilution Factor	10	10	10	10
Prep Date	08.17.00	08.17.00	08.17.00	08.17.00
Analysis Date	08.17.00	08.17.00	08.17.00	08.17.00
Batch ID	0817B	0817B	0817B	0817B



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LOG NO: S0-05521
Received: 15 AUG 00
Reported: 25 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 161500925
Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521-6	BioBatch3-T=1	08-08-00		SIL058
05521-7	BioBatch1-T=2	08-08-00		SIL058
05521-8	BioBatch2-T=2	08-08-00		SIL058
05521-9	BioBatch3-T=2	08-08-00		SIL058
05521-10	BioBatch1-T=4	08-08-00		SIL058
PARAMETER	05521-6	05521-7	05521-8	05521-9
Chemical Oxygen Demand (410.4), mg/l	460	490	490	470
Dilution Factor	1	1	1	1
Prep Date	08.23.00	08.23.00	08.23.00	08.23.00
Analysis Date	08.24.00	08.24.00	08.24.00	08.24.00
Batch ID	0823A	0823A	0823A	0823A
Total Organic Carbon (415.1), mg/l	160	170	160	160
Dilution Factor	10	10	10	10
Prep Date	08.17.00	08.17.00	08.18.00	08.18.00
Analysis Date	08.17.00	08.17.00	08.18.00	08.18.00
Batch ID	0817B	0817B	0818A	0818A



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LOG NO: S0-05521
Received: 15 AUG 00
Reported: 25 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 161500925

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521-11	BioBatch2-T=4		08-08-00	SIL058
05521-12	BioBatch3-T=4		08-08-00	SIL058
05521-13	BioBatch1-T=8		08-08-00	SIL058
05521-14	BioBatch2-T=8		08-08-00	SIL058
05521-15	BioBatch3-T=8		08-08-00	SIL058
PARAMETER	05521-11	05521-12	05521-13	05521-14
Chemical Oxygen Demand (410.4), mg/l	510	470	590	480
Dilution Factor	1	1	1	1
Prep Date	08.23.00	08.23.00	08.23.00	08.23.00
Analysis Date	08.24.00	08.24.00	08.24.00	08.24.00
Batch ID	0823A	0823A	0823A	0823A
Total Organic Carbon (415.1), mg/l	160	160	160	160
Dilution Factor	10	10	10	10
Prep Date	08.21.00	08.18.00	08.18.00	08.18.00
Analysis Date	08.21.00	08.18.00	08.18.00	08.18.00
Batch ID	0821A	0818A	0818A	0818A



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Client PO. No.: 4503148706
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Project: LEACHATE TREATABILITY
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REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521-16	BioBatch1-T=14	08-08-00		SIL058
05521-17	BioBatch2-T=14	08-08-00		SIL058
05521-18	BioBatch3-T=14	08-08-00		SIL058
PARAMETER		05521-16	05521-17	05521-18
Chemical Oxygen Demand (410.4), mg/l		460	490	440
Dilution Factor		1	1	1
Prep Date	08.23.00	08.23.00	08.23.00	
Analysis Date	08.24.00	08.24.00	08.24.00	
Batch ID	0823A	0823A	0823A	
Total Organic Carbon (415.1), mg/l		150	160	150
Dilution Factor		10	10	10
Prep Date	08.18.00	08.18.00	08.18.00	
Analysis Date	08.18.00	08.18.00	08.18.00	
Batch ID	0818A	0818A	0818A	

Angie Stewart
Angie Stewart, Project Manager



Serial Number

U25712

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

STL
Savannah
Laboratories
Environmental • Forensic • Industrial • Water Quality

PROJECT REFERENCE <i>leachate Treatability</i>	PROJECT NO. 00523	PROJECT LOCATION / (STATE) TN	MATRIX TYPE	REQUIRED ANALYSES						PAGE 1 OF 3		
CHLORINE PROJECT MANAGER <i>Stewart</i>	P.O. NUMBER	CONTRACTING								STANDARD REPORT DELIVERY		
CLIENT NAME <i>Int Campbell</i>	CLIENT PHONE 615-377-4775	CLIENT FAX 615-377-4976								DATE DUE		
CLIENT EMAIL										EXPEDITED REPORT DELIVERY (SURCHARGE)		
CLIENT ADDRESS <i>201 Summit View Dr. 3rd Floor Brentwood TN 37027</i>										DATE DUE		
COMPANY CONTRACTING THIS WORK (if applicable)												NUMBER OF COOLERS SUBMITTED PER SHIPMENT

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS/WATER	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	TOC	COD	TOC	Hg	Hg	Number of Containers Submitted	REMARKS
8/8/00		BioBatch 1 - T=0	X									1 1 X	
8/8/00		BioBatch 2 - T=0	X									1 1	
8/8/00		BioBatch 3 - T=0	X									1 1	
8/8/00		BioBatch 1 - T=1	X									1 1	
8/8/00		BioBatch 2 - T=1	X									1 1	
8/8/00		BioBatch 3 - T=1	X									1 1	
8/8/00		BioBatch 1 - T=2	X									1 1	
8/8/00		BioBatch 2 - T=2	X									1 1	
8/8/00		BioBatch 3 - T=2	X									1 1	
8/8/00		BioBatch 1 - T=4	X									1 1	
8/8/00		BioBatch 2 - T=4	X									1 1	
8/8/00		BioBatch 3 - T=4	X									1 1	

RELINQUISHED BY: (SIGNATURE) <i>Swafford</i>	DATE 7/20/00	TIME	RELINQUISHED BY: (SIGNATURE) <i>Janet Boddy</i>	DATE 8/14/00	TIME 5:30	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE) <i>K. Currier</i>	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY:	DATE 8/15/00	TIME 835	CUSTODY IN FACT YES NO	CUSTODY SEAL NO.	STL-SL LOG NO. So - 05521	LABORATORY REMARKS:
-----------------------------	------------------------	--------------------	------------------------------	------------------	-------------------------------------	---------------------

Serial Number

U2570



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRochelle Avenue, Savannah, GA 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 9001 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

Phone: (912) 354-1058 Fax: (912) 352-0165
 Phone: (850) 878-3994 Fax: (850) 878-9504
 Phone: (334) 666-6633 Fax: (334) 666-6096
 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE <i>Leachate Treatability</i>	PROJECT NO. <i>00523</i>	PROJECT LOCATION (STATE) <i>TN</i>	MATRIX TYPE	REQUIRED ANALYSES						PAGE <i>2</i> OF <i>3</i>			
CTL (LAB) PROJECT MANAGER <i>Stewart</i>	P.O. NUMBER	CONTRACT NO.		<input checked="" type="checkbox"/> TOC	<input type="checkbox"/> COD	<input type="checkbox"/> Veele	<input type="checkbox"/> SOCl ₂	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	STANDARD REPORT DELIVERY <input checked="" type="checkbox"/>	
CLIENT (S) NAME <i>Pac Campbell</i>	CLIENT PHONE <i>615-377-4775</i>	CLIENT FAX <i>615-377-4976</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DATE DUE <i>0</i>	
CLIENT NAME <i>The Advent Group</i>	CLIENT EMAIL <i>J.Baltz@adventgroup.org</i>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>	
CLIENT ADDRESS <i>201 Summit View Dr, 3rd Fl Brentwood, TN 37027</i>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DATE DUE <i>0</i>	
COMPANY CONTRACTING THIS WORK (if applicable):													
SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION			COMPOSITE (G) OR GRAB (G) DATE	AQUEOUS (WATER)	SOLID OR SEMI-SOLID	AIR	INDIVIDUALS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED			REMARKS
8/8/00		<i>BioBatch 1 - T=8</i>			X		X		X	1	1		
8/8/00		<i>BioBatch 2 - T=8</i>			X		X		X	1	1		
8/8/00		<i>BioBatch 3 - T=8</i>			X		X		X	1	1		
8/8/00		<i>BioBatch 1 - T=14</i>			X		X		X	1	1		
8/8/00		<i>BioBatch 2 - T=14</i>			X		X		X	1	1		
8/8/00		<i>BioBatch 3 - T=14</i>			X		X		X	1	1		
8/8/00		<i>BioBatch 1 - T=24</i>			X		X		X	1	1		
8/8/00		<i>BioBatch 2 - T=24</i>			X		X		X	1	1		
8/8/00		<i>BioBatch 3 - T=24</i>			X		X		X	1	1		
8/8/00		<i>BioBatch 1 - T=30</i>			X		X		X	1	1		
8/8/00		<i>BioBatch 2 - T=30</i>			X		X		X	1	1		
8/8/00		<i>BioBatch 3 - T=30</i>			X		X		X	1	1		
RELINQUISHED BY: (SIGNATURE)		DATE	TIME	RELINQUISHED BY: (SIGNATURE)		DATE	TIME	RELINQUISHED BY: (SIGNATURE)		DATE	TIME		
		<i>Jason Baltz</i>				<i>8/14/00</i>	<i>5:30</i>						
RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME		
LABORATORY USE ONLY													
RECEIVED FOR LABORATORY BY:		DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	LABORATORY REMARKS:							
<i>K. Lunn</i>		<i>8/15/00</i>	<i>8:35</i>	YES		<i>Sc-5521</i>							

ORIGINAL



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LOG NO: S0-05521A
Received: 15 AUG 00
Reported: 09 OCT 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 130501011
Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-1	BioBatch1-T=24	08-08-00		SIL059
05521A-2	BioBatch2-T=24	08-08-00		SIL059
05521A-3	BioBatch3-T=24	08-08-00		SIL059
05521A-4	BioBatch1-T=30	08-08-00		SIL059
05521A-5	BioBatch2-T=30	08-08-00		SIL059
PARAMETER	05521A-1	05521A-2	05521A-3	05521A-4
Chemical Oxygen Demand (410.4), mg/l	450	440	530	430
Dilution Factor	1	1	1	1
Prep Date	08.23.00	08.23.00	08.23.00	08.23.00
Analysis Date	08.24.00	08.24.00	08.24.00	08.24.00
Batch ID	0823B	0823B	0823B	0823B
Total Organic Carbon (415.1), mg/l	150	150	130	140
Dilution Factor	1	1	1	1
Prep Date	08.16.00	08.16.00	08.16.00	08.16.00
Analysis Date	08.16.00	08.16.00	08.16.00	08.16.00
Batch ID	0816A	0816A	0816A	0816A



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LOG NO: S0-05521A
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Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 111501011

REPORT OF RESULTS

Page 2

DATE/

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05521A-6	BioBatch3-T=30	08-08-00	SIL059
05521A-7	BioBatch1-T=48	08-10-00	SIL059
05521A-8	BioBatch2-T=48	08-10-00	SIL059
05521A-9	BioBatch3-T=48	08-10-00	SIL059
05521A-10	BioBatch1-T=54	08-10-00	SIL059
PARAMETER	05521A-6	05521A-7	05521A-8
Chemical Oxygen Demand (410.4), mg/l	410	300	330
Dilution Factor	1	1	1
Prep Date	08.23.00	08.23.00	08.23.00
Analysis Date	08.24.00	08.24.00	08.24.00
Batch ID	0823B	0823B	0823B
Total Organic Carbon (415.1), mg/l	130	93	98
Dilution Factor	1	1	1
Prep Date	08.16.00	08.16.00	08.16.00
Analysis Date	08.16.00	08.16.00	08.16.00
Batch ID	0816A	0816A	0816A
			0817A



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REPORT OF RESULTS

Page 3

DATE/

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
--------	-------------------------------------	--------------	------

05521A-11	BioBatch2-T=54	08-10-00	SIL059
05521A-12	BioBatch3-T=54	08-10-00	SIL059
05521A-13	BioBatch1-T=72	08-11-00	SIL059
05521A-14	BioBatch2-T=72	08-11-00	SIL059
05521A-15	BioBatch3-T=72	08-11-00	SIL059

PARAMETER	05521A-11	05521A-12	05521A-13	05521A-14	05521A-15
-----------	-----------	-----------	-----------	-----------	-----------

Chemical Oxygen Demand (410.4), mg/l	400	290	390	330	280
Dilution Factor	1	1	1	1	1
Prep Date	08.23.00	08.23.00	08.23.00	08.23.00	08.23.00
Analysis Date	08.24.00	08.24.00	08.24.00	08.24.00	08.24.00
Batch ID	0823B	0823B	0823B	0823B	0823B

Total Organic Carbon (415.1), mg/l	110	110	95	94	88
Dilution Factor	10	10	10	10	10
Prep Date	08.17.00	08.17.00	08.17.00	08.17.00	08.17.00
Analysis Date	08.17.00	08.17.00	08.17.00	08.17.00	08.17.00
Batch ID	0817A	0817A	0817A	0817A	0817A



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Page 4

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-16	BioBatch1-T=76	08-11-00		SIL059
05521A-16-RE	BioBatch1-T=76	08-11-00		SIL059
05521A-16-DL	BioBatch1-T=76	08-11-00		SIL059
05521A-17	BioBatch2-T=76	08-11-00		SIL059
PARAMETER	05521A-16	05521A-16-RE	05521A-16-DL	05521A-17
Chemical Oxygen Demand (410.4), mg/l	290			320
Dilution Factor	1	---	---	1
Prep Date	08.23.00	---	---	08.23.00
Analysis Date	08.24.00	---	---	08.24.00
Batch ID	0823B	---	---	0823B
Total Organic Carbon (415.1), mg/l	85			90
Dilution Factor	10	---	---	10
Prep Date	08.18.00	---	---	08.18.00
Analysis Date	08.18.00	---	---	08.18.00
Batch ID	0818A	---	---	0818A



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Project: LEACHATE TREATABILITY
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Page 5

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-16	BioBatch1-T=76	08-11-00		SIL059
05521A-16-RE	BioBatch1-T=76	08-11-00		SIL059
05521A-16-DL	BioBatch1-T=76	08-11-00		SIL059
05521A-17	BioBatch2-T=76	08-11-00		SIL059
PARAMETER	05521A-16 05521A-16-RE 05521A-16-DL 05521A-17			
TCL Semivolatiles (8270)				
Phenol, ug/l	10U	---	200U	48J
bis(2-Chloroethyl)ether, ug/l	10U	---	200U	200U
2-Chlorophenol, ug/l	70	---	84DJ	120J
1,3-Dichlorobenzene, ug/l	0.68J	---	200U	200U
1,4-Dichlorobenzene, ug/l	11	---	13DJ	200U
1,2-Dichlorobenzene, ug/l	10	---	12DJ	21J
2-Methylphenol (o-Cresol), ug/l	32	---	42DJ	47J
2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether), ug/l	10U	---	200U	200U
3-Methylphenol/4-Methylphen ol (m&p-Cresol), ug/l	94	---	120DJ	120J
N-Nitroso-di-n-propylamine, ug/l	10U	---	200U	200U
Hexachloroethane, ug/l	1.9U	---	38U	38U
Nitrobenzene, ug/l	4.9	---	14DJ	70U
Isophorone, ug/l	10U	---	200U	200U
2-Nitrophenol, ug/l	10U	---	200U	200U
bis(2-Chloroethoxy)methane, ug/l	10U	---	200U	200U
2,4-Dichlorophenol, ug/l	380E	---	510D	540



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Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 111501011

Page 6

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
PARAMETER	05521A-16 05521A-16-RE 05521A-16-DL 05521A-17			
05521A-16	BioBatch1-T=76	08-11-00		SIL059
05521A-16-RE	BioBatch1-T=76	08-11-00		SIL059
05521A-16-DL	BioBatch1-T=76	08-11-00		SIL059
05521A-17	BioBatch2-T=76	08-11-00		SIL059
1, 2, 4-Trichlorobenzene, ug/l	10	---	14DJ	13J
Naphthalene, ug/l	860E	---	1100D	1000
4-Chloroaniline, ug/l	2400E	---	4900D	5200
Hexachlorobutadiene, ug/l	10U	---	200U	200U
4-Chloro-3-methylphenol, ug/l	10U	---	200U	200U
2-Methylnaphthalene, ug/l	10U	---	200U	200U
Hexachlorocyclopentadiene, ug/l	10U	---	200U	200U
2, 4, 6-Trichlorophenol, ug/l	180	---	300D	270
2, 4, 5-Trichlorophenol, ug/l	9.4J	---	200U	200U
2-Chloronaphthalene, ug/l	6.1J	---	200U	200U
2-Nitroaniline, ug/l	50U	---	1000U	1000U
Dimethylphthalate, ug/l	2.8J	---	200U	200U
Acenaphthylene, ug/l	10U	---	200U	200U
3-Nitroaniline, ug/l	50U	---	1000U	1000U
Acenaphthene, ug/l	10U	---	200U	200U
2, 4-Dinitrophenol, ug/l	14U	---	280U	280U
4-Nitrophenol, ug/l	47J	---	1000U	1000U
Dibenzofuran, ug/l	10U	---	200U	200U
2, 4-Dinitrotoluene, ug/l	10U	---	200U	200U
2, 6-Dinitrotoluene, ug/l	10U	---	200U	200U



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Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 111501011

REPORT OF RESULTS

Page 7

DATE/

TIME SAMPLED SDG#

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	08-11-00	SIL059
05521A-16	BioBatch1-T=76	08-11-00	SIL059
05521A-16-RE	BioBatch1-T=76	08-11-00	SIL059
05521A-16-DL	BioBatch1-T=76	08-11-00	SIL059
05521A-17	BioBatch2-T=76	08-11-00	SIL059

PARAMETER	05521A-16	05521A-16-RE	05521A-16-DL	05521A-17
-----------	-----------	--------------	--------------	-----------

Diethylphthalate, ug/l	4.8J	---	200U	200U
4-Chlorophenylphenyl ether, ug/l	10U	---	200U	200U
Fluorene, ug/l	1.0U	---	20U	20U
4-Nitroaniline, ug/l	50U	---	1000U	1000U
4,6-Dinitro-2-methylphenol, ug/l	13U	---	260U	260U
N-Nitrosodiphenylamine, ug/l	5.0U	---	100U	100U
4-Bromophenylphenyl ether, ug/l	1.0U	---	20U	20U
Hexachlorobenzene, ug/l	10	---	16DJ	11J
Pentachlorophenol, ug/l	490E	---	1500D	1100
Phenanthrene, ug/l	0.85J	---	200U	200U
Anthracene, ug/l	10U	---	200U	200U
Di-n-butylphthalate, ug/l	10U	---	200U	200U
Fluoranthene, ug/l	10U	---	200U	200U
Pyrene, ug/l	10U	---	200U	200U
Butylbenzylphthalate, ug/l	10U	---	200U	200U
3,3'-Dichlorobenzidine, ug/l	20U	---	400U	400U
Benzo(a)anthracene, ug/l	10U	---	200U	200U
bis(2-Ethylhexyl)phthalate, ug/l	5.7B	---	36DB	39B
Chrysene, ug/l	10U	---	200U	200U
Di-n-octylphthalate, ug/l	10U	---	200U	200U



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201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 111501011

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-16	BioBatch1-T=76	08-11-00		SIL059
05521A-16-RE	BioBatch1-T=76	08-11-00		SIL059
05521A-16-DL	BioBatch1-T=76	08-11-00		SIL059
05521A-17	BioBatch2-T=76	08-11-00		SIL059
PARAMETER	05521A-16	05521A-16-RE	05521A-16-DL	05521A-17
Benzo(b)fluoranthene, ug/l	10U	---	200U	200U
Benzo(k)fluoranthene, ug/l	10U	---	200U	200U
Benzo(a)pyrene, ug/l	10U	---	200U	200U
Indeno(1,2,3-cd)pyrene, ug/l	10U	---	200U	200U
Dibenzo(a,h)anthracene, ug/l	10U	---	200U	200U
Benzo(g,h,i)perylene, ug/l	10U	---	200U	200U
Carbazole, ug/l	0.65J	---	68U	68U
Surrogate - Phenol-d5	72 %	---	OD %	OD %
Surrogate - 2-Fluorophenol	70 %	---	OD %	OD %
Surrogate - 2,4,6-Tribromophenol	64 %	---	OD %	OD %
Surrogate - Nitrobenzene - d5	62 %	---	OD %	OD %
Surrogate - 2-Fluorobiphenyl	36 %	---	OD %	OD %
Surrogate - Terphenyl-d14	24 %	---	OD %	OD %
Dilution Factor	1	---	20	20
Prep Date	08.16.00	---	08.16.00	08.16.00
Analysis Date	08.20.00	---	08.28.00	08.28.00
Batch ID	0816B	---	0816B	0816B



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-16	BioBatch1-T=76	08-11-00		SIL059
05521A-16-RE	BioBatch1-T=76	08-11-00		SIL059
05521A-16-DL	BioBatch1-T=76	08-11-00		SIL059
05521A-17	BioBatch2-T=76	08-11-00		SIL059
PARAMETER	05521A-16	05521A-16-RE	05521A-16-DL	05521A-17
Chlorinated Herbicides (8151)				
2,4-D, ug/l	750E	---	880D	680E
2,4-DB, ug/l	25U	---	120U	25U
2,4,5-T, ug/l	40P	---	47DJ	35P
2,4,5-TP (Silvex), ug/l	25U	---	120U	25U
Dalapon, ug/l	6000U	---	30000U	6000U
Dicamba, ug/l	1.3JP	---	300U	1.4JP
Dichloroprop, ug/l	300U	---	1500U	5.0JP
Dinoseb, ug/l	0.68JP	---	1500U	300U
MCPA [(4-chloro-2-methylphenoxy)-acetic acid], ug/l	6000U	---	30000U	6000U
MCPP [2-(4-chloro-2-methylphenoxy)-propanoic acid], ug/l	3200JP	---	30000U	3200JP
Surrogate-DCAA	0 %D	---	0 %D	0 %D
Pentachlorophenol, ug/l	420E	---	390D	370E
Dilution Factor	50	---	250	50
Prep Date	08.17.00	---	08.17.00	08.17.00
Analysis Date	09.21.00	---	09.29.00	09.21.00
Batch ID	08170	---	08170	08170



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REPORT OF RESULTS

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DATE/
TIME SAMPLED SDG#

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	08-11-00	SIL059
05521A-16	BioBatch1-T=76	08-11-00	SIL059
05521A-16-RE	BioBatch1-T=76	08-11-00	SIL059
05521A-16-DL	BioBatch1-T=76	08-11-00	SIL059
05521A-17	BioBatch2-T=76	08-11-00	SIL059

PARAMETER 05521A-16 05521A-16-RE 05521A-16-DL 05521A-17

Volatiles by GC/MS (8260)

Chloromethane, ug/l	10U	---	---	10U
Bromomethane (Methyl bromide), ug/l	9.8U	---	---	9.8U
Vinyl chloride, ug/l	10U	---	---	10U
Chloroethane, ug/l	10U	---	---	10U
Methylene chloride (Dichloromethane), ug/l	4.7U	---	---	0.39J
Acetone, ug/l	280	---	---	610
Carbon disulfide, ug/l	5.0U	---	---	5.0U
1,1-Dichloroethene, ug/l	5.0U	---	---	5.0U
1,1-Dichloroethane, ug/l	5.0U	---	---	5.0U
Cis/Trans-1,2-Dichloroethene, ug/l	5.0U	---	---	5.0U
Chloroform, ug/l	5.0U	---	---	5.0U
1,2-Dichloroethane, ug/l	5.0U	---	---	5.0U
2-Butanone (MEK), ug/l	15J	---	---	14J
1,1,1-Trichloroethane, ug/l	5.0U	---	---	0.48J
Carbon tetrachloride, ug/l	5.0U	---	---	5.0U
Bromodichloromethane, ug/l	5.0U	---	---	5.0U
1,1,2,2-Tetrachloroethane, ug/l	5.0U	---	---	5.0U



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-16	BioBatch1-T=76	08-11-00		SIL059
05521A-16-RE	BioBatch1-T=76	08-11-00		SIL059
05521A-16-DL	BioBatch1-T=76	08-11-00		SIL059
05521A-17	BioBatch2-T=76	08-11-00		SIL059
PARAMETER	05521A-16	05521A-16-RE	05521A-16-DL	05521A-17
1,2-Dichloropropane, ug/l	5.0U	---	---	5.0U
trans-1,3-Dichloropropene, ug/l	5.0U	---	---	5.0U
Trichloroethene, ug/l	2.7U	---	---	2.7U
Dibromochloromethane, ug/l	5.0U	---	---	5.0U
1,1,2-Trichloroethane, ug/l	5.0U	---	---	5.0U
Benzene, ug/l	1.2U	---	---	1.2U
cis-1,3-Dichloropropene, ug/l	1.0U	---	---	1.0U
Bromoform, ug/l	5.0U	---	---	5.0U
2-Hexanone, ug/l	25U	---	---	25U
4-Methyl-2-pentanone (MIBK), ug/l	25U	---	---	25U
Tetrachloroethene, ug/l	5.0U	---	---	5.0U
Toluene, ug/l	5.0U	---	---	5.0U
Chlorobenzene, ug/l	2.4J	---	---	4.4J
Ethylbenzene, ug/l	5.0U	---	---	5.0U
Styrene, ug/l	5.0U	---	---	5.0U
Xylenes, Total, ug/l	5.0U	---	---	5.0U
Surrogate - Toluene-d8	102 %	---	---	100 %
Surrogate - 4-Bromofluorobenzene	92 %	---	---	94 %
Surrogate - Dibromofluoromethane	100 %	---	---	98 %
Dilution Factor	1	---	---	1
Analysis Date	08.24.00	---	---	08.24.00
Batch ID	1B0824	---	---	1B0824



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05521A-16	BioBatch1-T=76	08-11-00	SIL059
05521A-16-RE	BioBatch1-T=76	08-11-00	SIL059
05521A-16-DL	BioBatch1-T=76	08-11-00	SIL059
05521A-17	BioBatch2-T=76	08-11-00	SIL059
PARAMETER	05521A-16	05521A-16-RE	05521A-16-DL
TCL Pesticides (8081)			05521A-17
alpha-BHC, ug/l	0.32	0.060J	---
beta-BHC, ug/l	0.070U	0.070U	0.070U
delta-BHC, ug/l	0.060U	0.060U	0.060U
gamma-BHC (Lindane), ug/l	1.4	0.095U	0.11P
Heptachlor, ug/l	0.25U	0.25U	0.25U
Aldrin, ug/l	0.25U	0.25U	0.25U
Heptachlor epoxide, ug/l	0.25U	0.25U	0.25U
Endosulfan I, ug/l	0.25U	0.25U	0.25U
Dieldrin, ug/l	0.50U	0.50U	0.50U
4,4'-DDE, ug/l	0.50U	0.50U	0.50U
Endrin, ug/l	0.50U	0.50U	0.50U
Endrin aldehyde, ug/l	0.50U	0.50U	0.50U
Endosulfan II, ug/l	0.50U	0.50U	0.50U
4,4'-DDD, ug/l	0.50U	0.50U	0.50U
Endosulfan sulfate, ug/l	0.50U	0.50U	0.50U
4,4'-DDT, ug/l	0.50U	0.50U	0.50U
Endrin ketone, ug/l	0.50U	0.50U	0.50U
Methoxychlor, ug/l	2.5U	2.5U	2.5U
alpha-Chlordane, ug/l	0.25U	0.25U	0.25U



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-16	BioBatch1-T=76	08-11-00		SIL059
05521A-16-RE	BioBatch1-T=76	08-11-00		SIL059
05521A-16-DL	BioBatch1-T=76	08-11-00		SIL059
05521A-17	BioBatch2-T=76	08-11-00		SIL059
PARAMETER	05521A-16	05521A-16-RE	05521A-16-DL	05521A-17
gamma-Chlordane, ug/l	0.25U	0.25U	---	0.25U
Toxaphene, ug/l	25U	25U	---	25U
Surrogate - DCB	0 %X	2 %X	---	13 %X
Surrogate -	0 %X	7 %X	---	0 %X
2,4,5,6-Tetrachloro-m-xylene (TCMX)				
Dilution Factor	5	5	---	5
Prep Date	08.16.00	08.29.00	---	08.16.00
Analysis Date	08.24.00	09.28.00	---	08.24.00
Batch ID	0816N	0829P	---	0816N
Biochemical Oxygen Demand (5 Day) (405.1/5210B), mg/l	68			69
Dilution Factor		---	---	
Prep Date	08.15.00	---	---	08.15.00
Analysis Date	08.15.00	---	---	08.15.00
Batch ID	0815A	---	---	0815A



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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-16	BioBatch1-T=76	08-11-00		SIL059
05521A-16-RE	BioBatch1-T=76	08-11-00		SIL059
05521A-16-DL	BioBatch1-T=76	08-11-00		SIL059
05521A-17	BioBatch2-T=76	08-11-00		SIL059
PARAMETER	05521A-16	05521A-16-RE	05521A-16-DL	05521A-17
Nitrogen, Total Kjeldahl (351.2)				
Total Kjeldahl Nitrogen-N, mg/l	7.4	---	---	9.5
Dilution Factor	2	---	---	2
Prep Date	08.18.00	---	---	08.18.00
Analysis Date	08.22.00	---	---	08.22.00
Batch ID	0818A	---	---	0818A



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-17-DL	BioBatch2-T=76		08-11-00	SIL059
05521A-17-RE	BioBatch2-T=76		08-11-00	SIL059
05521A-18	BioBatch3-T-76		08-11-00	SIL059
05521A-18-DL	BioBatch3-T-76		08-11-00	SIL059
PARAMETER	05521A-17-DL	05521A-17-RE	05521A-18	05521A-18-DL
Chemical Oxygen Demand (410.4), mg/l			270	
Dilution Factor	---	---	1	---
Prep Date	---	---	08.23.00	---
Analysis Date	---	---	08.24.00	---
Batch ID	---	---	0823B	---
Total Organic Carbon (415.1), mg/l			82	
Dilution Factor	---	---	10	---
Prep Date	---	---	08.18.00	---
Analysis Date	---	---	08.18.00	---
Batch ID	---	---	0818A	---



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DATE/

TIME SAMPLED SDG#

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-17-DL	BioBatch2-T=76	08-11-00		SIL059
05521A-17-RE	BioBatch2-T=76	08-11-00		SIL059
05521A-18	BioBatch3-T-76	08-11-00		SIL059
05521A-18-DL	BioBatch3-T-76	08-11-00		SIL059

PARAMETER	05521A-17-DL	05521A-17-RE	05521A-18	05521A-18-DL
-----------	--------------	--------------	-----------	--------------

TCL Semivolatiles (8270)

Phenol, ug/l	---	---	55J	---
bis(2-Chloroethyl)ether, ug/l	---	---	200U	---
2-Chlorophenol, ug/l	---	---	58J	---
1,3-Dichlorobenzene, ug/l	---	---	200U	---
1,4-Dichlorobenzene, ug/l	---	---	200U	---
1,2-Dichlorobenzene, ug/l	---	---	200U	---
2-Methylphenol (o-Cresol), ug/l	---	---	22J	---
2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether), ug/l	---	---	200U	---
3-Methylphenol/4-Methylphenol (m&p-Cresol), ug/l	---	---	56J	---
N-Nitroso-di-n-propylamine, ug/l	---	---	200U	---
Hexachloroethane, ug/l	---	---	38U	---
Nitrobenzene, ug/l	---	---	70U	---
Isophorone, ug/l	---	---	200U	---
2-Nitrophenol, ug/l	---	---	200U	---
bis(2-Chloroethoxy)methane, ug/l	---	---	200U	---
2,4-Dichlorophenol, ug/l	---	---	380	---



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05521A-17-DL	BioBatch2-T=76		08-11-00	SIL059
05521A-17-RE	BioBatch2-T=76		08-11-00	SIL059
05521A-18	BioBatch3-T-76		08-11-00	SIL059
05521A-18-DL	BioBatch3-T-76		08-11-00	SIL059
PARAMETER	05521A-17-DL	05521A-17-RE	05521A-18	05521A-18-DL
1,2,4-Trichlorobenzene, ug/l	---	---	7.7J	---
Naphthalene, ug/l	---	---	200U	---
4-Chloroaniline, ug/l	---	---	4400	---
Hexachlorobutadiene, ug/l	---	---	200U	---
4-Chloro-3-methylphenol, ug/l	---	---	200U	---
2-Methylnaphthalene, ug/l	---	---	200U	---
Hexachlorocyclopentadiene, ug/l	---	---	200U	---
2,4,6-Trichlorophenol, ug/l	---	---	180	---
2,4,5-Trichlorophenol, ug/l	---	---	200U	---
2-Chloronaphthalene, ug/l	---	---	200U	---
2-Nitroaniline, ug/l	---	---	1000U	---
Dimethylphthalate, ug/l	---	---	200U	---
Acenaphthylene, ug/l	---	---	200U	---
3-Nitroaniline, ug/l	---	---	1000U	---
Acenaphthene, ug/l	---	---	200U	---
2,4-Dinitrophenol, ug/l	---	---	280U	---
4-Nitrophenol, ug/l	---	---	1000U	---
Dibenzofuran, ug/l	---	---	200U	---
2,4-Dinitrotoluene, ug/l	---	---	200U	---
2,6-Dinitrotoluene, ug/l	---	---	200U	---



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05521A-17-RE	BioBatch2-T=76	08-11-00	SIL059
05521A-18	BioBatch3-T-76	08-11-00	SIL059
05521A-18-DL	BioBatch3-T-76	08-11-00	SIL059
PARAMETER	05521A-17-DL	05521A-17-RE	05521A-18
05521A-18-DL			
Diethylphthalate, ug/l	---	---	200U
4-Chlorophenylphenyl ether, ug/l	---	---	200U
Fluorene, ug/l	---	---	20U
4-Nitroaniline, ug/l	---	---	1000U
4,6-Dinitro-2-methylphenol, ug/l	---	---	260U
N-Nitrosodiphenylamine, ug/l	---	---	100U
4-Bromophenylphenyl ether, ug/l	---	---	20U
Hexachlorobenzene, ug/l	---	---	17J
Pentachlorophenol, ug/l	---	---	410
Phenanthrene, ug/l	---	---	200U
Anthracene, ug/l	---	---	200U
Di-n-butylphthalate, ug/l	---	---	200U
Fluoranthene, ug/l	---	---	200U
Pyrene, ug/l	---	---	200U
Butylbenzylphthalate, ug/l	---	---	200U
3,3'-Dichlorobenzidine, ug/l	---	---	400U
Benzo(a)anthracene, ug/l	---	---	200U
bis(2-Ethylhexyl)phthalate, ug/l	---	---	56B
Chrysene, ug/l	---	---	200U
Di-n-octylphthalate, ug/l	---	---	200U



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05521A-18	BioBatch3-T-76		08-11-00	SIL059
05521A-18-DL	BioBatch3-T-76		08-11-00	SIL059

PARAMETER	05521A-17-DL	05521A-17-RE	05521A-18	05521A-18-DL
Benzo(b)fluoranthene, ug/l	---	---	200U	---
Benzo(k)fluoranthene, ug/l	---	---	200U	---
Benzo(a)pyrene, ug/l	---	---	200U	---
Indeno(1,2,3-cd)pyrene, ug/l	---	---	200U	---
Dibenzo(a,h)anthracene, ug/l	---	---	200U	---
Benzo(g,h,i)perylene, ug/l	---	---	200U	---
Carbazole, ug/l	---	---	68U	---
Surrogate - Phenol-d5	---	---	OD %	---
Surrogate - 2-Fluorophenol	---	---	OD %	---
Surrogate - 2,4,6-Tribromophenol	---	---	OD %	---
Surrogate - Nitrobenzene - d5	---	---	OD %	---
Surrogate - 2-Fluorobiphenyl	---	---	OD %	---
Surrogate - Terphenyl-d14	---	---	OD %	---
Dilution Factor	---	---	20	---
Prep Date	---	---	08.16.00	---
Analysis Date	---	---	08.28.00	---
Batch ID	---	---	0816B	---



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LOG NO: S0-05521A
Received: 15 AUG 00
Reported: 09 OCT 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 111501011
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-17-DL	BioBatch2-T=76	08-11-00		SIL059
05521A-17-RE	BioBatch2-T=76	08-11-00		SIL059
05521A-18	BioBatch3-T-76	08-11-00		SIL059
05521A-18-DL	BioBatch3-T-76	08-11-00		SIL059
PARAMETER	05521A-17-DL	05521A-17-RE	05521A-18	05521A-18-DL
Chlorinated Herbicides (8151)				
2,4-D, ug/l	920D	---	260E	370D
2,4-DB, ug/l	120U	---	25U	50U
2,4,5-T, ug/l	45DPJ	---	8.7JP	50U
2,4,5-TP (Silvex), ug/l	120U	---	25U	50U
Dalapon, ug/l	30000U	---	6000U	12000U
Dicamba, ug/l	300U	---	60U	120U
Dichloroprop, ug/l	1500U	---	300U	600U
Dinoseb, ug/l	1500U	---	300U	600U
MCPA [(4-chloro-2-methylphenoxy)-acetic acid], ug/l	30000U	---	6000U	12000U
MCPP [2-(4-chloro-2-methylphenoxy)-propanoic acid], ug/l	30000U	---	6000U	4300DPJ
Surrogate-DCAA	0 %D	---	0 %D	0 %D
Pentachlorophenol, ug/l	410D	---	230E	230D
Dilution Factor	250	---	50	100
Prep Date	08.17.00	---	08.17.00	08.17.00
Analysis Date	09.29.00	---	09.21.00	09.29.00
Batch ID	08170	---	08170	08170



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Code: 111501011
Page 21

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05521A-17-DL	BioBatch2-T=76	08-11-00	SIL059
05521A-17-RE	BioBatch2-T=76	08-11-00	SIL059
05521A-18	BioBatch3-T-76	08-11-00	SIL059
05521A-18-DL	BioBatch3-T-76	08-11-00	SIL059
PARAMETER	05521A-17-DL 05521A-17-RE	05521A-18 05521A-18-DL	
Volatiles by GC/MS (8260)			
Chloromethane, ug/l	---	---	10U
Bromomethane (Methyl bromide), ug/l	---	---	9.8U
Vinyl chloride, ug/l	---	---	10U
Chloroethane, ug/l	---	---	1.7J
Methylene chloride (Dichloromethane), ug/l	---	---	0.40JB
Acetone, ug/l	---	---	46J
Carbon disulfide, ug/l	---	---	5.0U
1,1-Dichloroethene, ug/l	---	---	5.0U
1,1-Dichloroethane, ug/l	---	---	5.0U
Cis/Trans-1,2-Dichloroethene, ug/l	---	---	5.0U
Chloroform, ug/l	---	---	5.0U
1,2-Dichloroethane, ug/l	---	---	5.0U
2-Butanone (MEK), ug/l	---	---	25U
1,1,1-Trichloroethane, ug/l	---	---	0.48J
Carbon tetrachloride, ug/l	---	---	5.0U
Bromodichloromethane, ug/l	---	---	5.0U
1,1,2,2-Tetrachloroethane, ug/l	---	---	5.0U
1,2-Dichloropropane, ug/l	---	---	5.0U



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Sampled By: Client
Code: 111501011

REPORT OF RESULTS

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DATE/

TIME SAMPLED SDG#

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	08-11-00	SIL059
05521A-17-DL	BioBatch2-T=76	08-11-00	SIL059
05521A-17-RE	BioBatch2-T=76	08-11-00	SIL059
05521A-18	BioBatch3-T-76	08-11-00	SIL059
05521A-18-DL	BioBatch3-T-76	08-11-00	SIL059

PARAMETER	05521A-17-DL	05521A-17-RE	05521A-18	05521A-18-DL
-----------	--------------	--------------	-----------	--------------

trans-1,3-Dichloropropene, ug/l	---	---	5.0U	---
Trichloroethene, ug/l	---	---	2.7U	---
Dibromochloromethane, ug/l	---	---	5.0U	---
1,1,2-Trichloroethane, ug/l	---	---	5.0U	---
Benzene, ug/l	---	---	1.2U	---
cis-1,3-Dichloropropene, ug/l	---	---	1.0U	---
Bromoform, ug/l	---	---	5.0U	---
2-Hexanone, ug/l	---	---	25U	---
4-Methyl-2-pentanone (MIBK), ug/l	---	---	25U	---
Tetrachloroethene, ug/l	---	---	5.0U	---
Toluene, ug/l	---	---	5.0U	---
Chlorobenzene, ug/l	---	---	6.0	---
Ethylbenzene, ug/l	---	---	5.0U	---
Styrene, ug/l	---	---	5.0U	---
Xylenes, Total, ug/l	---	---	5.0U	---
Surrogate - Toluene-d8	---	---	100 %	---
Surrogate - 4-Bromofluorobenzene	---	---	94 %	---
Surrogate - Dibromofluoromethane	---	---	106 %	---
Dilution Factor	---	---	1	---
Analysis Date	---	---	08.24.00	---
Batch ID	---	---	1B0824	---



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Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 111501011
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-17-DL	BioBatch2-T=76	08-11-00		SIL059
05521A-17-RE	BioBatch2-T=76	08-11-00		SIL059
05521A-18	BioBatch3-T-76	08-11-00		SIL059
05521A-18-DL	BioBatch3-T-76	08-11-00		SIL059
PARAMETER	05521A-17-DL	05521A-17-RE	05521A-18	05521A-18-DL
TCL Pesticides (8081)				
alpha-BHC, ug/l	---	0.072J	0.20P	---
beta-BHC, ug/l	---	0.070U	0.014U	---
delta-BHC, ug/l	---	0.060U	0.012U	---
gamma-BHC (Lindane), ug/l	---	0.095U	0.50P	---
Heptachlor, ug/l	---	0.25U	0.050U	---
Aldrin, ug/l	---	0.25U	0.050U	---
Heptachlor epoxide, ug/l	---	0.25U	0.050U	---
Endosulfan I, ug/l	---	0.25U	0.050U	---
Dieldrin, ug/l	---	0.50U	0.10U	---
4,4'-DDE, ug/l	---	0.50U	0.10U	---
Endrin, ug/l	---	0.50U	0.10U	---
Endrin aldehyde, ug/l	---	0.50U	0.10U	---
Endosulfan II, ug/l	---	0.50U	0.10U	---
4,4'-DDD, ug/l	---	0.50U	0.10U	---
Endosulfan sulfate, ug/l	---	0.50U	0.10U	---
4,4'-DDT, ug/l	---	0.50U	0.10U	---
Endrin ketone, ug/l	---	0.50U	0.10U	---
Methoxychlor, ug/l	---	2.5U	0.50U	---
alpha-Chlordane, ug/l	---	0.25U	0.066P	---



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Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 111501011

REPORT OF RESULTS

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DATE/

TIME SAMPLED SDG#

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-17-DL	BioBatch2-T=76	08-11-00		SIL059
05521A-17-RE	BioBatch2-T=76	08-11-00		SIL059
05521A-18	BioBatch3-T-76	08-11-00		SIL059
05521A-18-DL	BioBatch3-T-76	08-11-00		SIL059

PARAMETER	05521A-17-DL	05521A-17-RE	05521A-18	05521A-18-DL
-----------	--------------	--------------	-----------	--------------

gamma-Chlordane, ug/l	---	0.25U	0.050U	---
Toxaphene, ug/l	---	25U	5.0U	---
Surrogate - DCB	---	0 %X	0 %X	---
Surrogate -	---	0 %X	0 %X	---
2,4,5,6-Tetrachloro-m-xylene (TCMX)				
Dilution Factor	---	5	1	---
Prep Date	---	08.29.00	08.16.00	---
Analysis Date	---	09.28.00	08.21.00	---
Batch ID	---	0829P	0816N	---

Biochemical Oxygen Demand	460
---------------------------	-----

(5 Day) (405.1/5210B), mg/l

Dilution Factor	---	---	---
Prep Date	---	---	08.15.00
Analysis Date	---	---	08.15.00
Batch ID	---	---	0815A



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Brentwood, TN 37027

Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 111501011

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-17-DL	BioBatch2-T=76	08-11-00		SIL059
05521A-17-RE	BioBatch2-T=76	08-11-00		SIL059
05521A-18	BioBatch3-T-76	08-11-00		SIL059
05521A-18-DL	BioBatch3-T-76	08-11-00		SIL059
PARAMETER	05521A-17-DL	05521A-17-RE	05521A-18	05521A-18-DL
Nitrogen, Total Kjeldahl (351.2)				
Total Kjeldahl Nitrogen-N, mg/l	---	---	17	---
Dilution Factor	---	---	10	---
Prep Date	---	---	08.18.00	---
Analysis Date	---	---	08.22.00	---
Batch ID	---	---	0818A	---



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Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 111501011
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE /	TIME SAMPLED	SDG#
05521A-18-RE	BioBatch3-T-76		08-11-00	SIL059
PARAMETER	05521A-18-RE			
Chemical Oxygen Demand (410.4)				
Total Organic Carbon (415.1)				
TCL Semivolatiles (8270)				
Chlorinated Herbicides (8151)				
Volatiles by GC/MS (8260)				



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Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 111501011
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05521A-18-RE	BioBatch3-T-76	08-11-00	SIL059
PARAMETER	05521A-18-RE		
TCL Pesticides (8081)			
alpha-BHC, ug/l	0.039U		
beta-BHC, ug/l	0.086P		
delta-BHC, ug/l	0.012U		
gamma-BHC (Lindane), ug/l	0.019U		
Heptachlor, ug/l	0.050U		
Aldrin, ug/l	0.050U		
Heptachlor epoxide, ug/l	0.050U		
Endosulfan I, ug/l	0.050U		
Dieldrin, ug/l	0.10U		
4,4'-DDE, ug/l	0.10U		
Endrin, ug/l	0.10U		
Endrin aldehyde, ug/l	0.10U		
Endosulfan II, ug/l	0.10U		
4,4'-DDD, ug/l	0.10U		
Endosulfan sulfate, ug/l	0.10U		
4,4'-DDT, ug/l	0.10U		
Endrin ketone, ug/l	0.10U		
Methoxychlor, ug/l	0.50U		
alpha-Chlordane, ug/l	0.050U		
gamma-Chlordane, ug/l	0.035J		
Toxaphene, ug/l	5.0U		
Surrogate - DCB	0 *X		
Surrogate -	0 *X		
2,4,5,6-Tetrachloro-m-xylene (TCMX)			
Dilution Factor	1		
Prep Date	09.20.00		
Analysis Date	09.28.00		
Batch ID	0920R		



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Sampled By: Client

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-18-RE	BioBatch3-T-76		08-11-00	SIL059
PARAMETER	05521A-18-RE			
Biochemical Oxygen Demand (5 Day) (405.1/5210B)				
Nitrogen, Total Kjeldahl (351.2)				



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Page 29

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-19	Sauget Leachate		08-11-00	SIL059
PARAMETER	05521A-19			
<hr/>				
Polychlorinated Biphenyls (680)				
Monochlorobiphenyl, ug/l	0.36			
Dichlorobiphenyl, ug/l	0.10			
Trichlorobiphenyl, ug/l	0.08J			
Tetrachlorobiphenyl, ug/l	0.91			
Pentachlorobiphenyl, ug/l	3.1			
Hexachlorobiphenyl, ug/l	2.9			
Heptachlorobiphenyl, ug/l	0.95			
Octachlorobiphenyl, ug/l	0.31			
Nonachlorobiphenyl, ug/l	0.50U			
Decachlorobiphenyl, ug/l	0.50U			
Surrogate - DCB 13C12	41 %			
Dilution Factor	1			
Prep Date	08.18.00			
Analysis Date	08.24.00			
Batch ID	0818B			
<hr/>				



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Code: 111501011

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05521A-19	Sauget Leachate		08-11-00	SIL059
PARAMETER	05521A-19			
TCL Pesticides (8081)				
alpha-BHC, ug/l	20U			
beta-BHC, ug/l	7.0U			
delta-BHC, ug/l	6.0U			
gamma-BHC (Lindane), ug/l	9.5U			
Heptachlor, ug/l	25U			
Aldrin, ug/l	25U			
Heptachlor epoxide, ug/l	25U			
Endosulfan I, ug/l	25U			
Dieldrin, ug/l	50U			
4,4'-DDE, ug/l	50U			
Endrin, ug/l	50U			
Endrin aldehyde, ug/l	50U			
Endosulfan II, ug/l	50U			
4,4'-DDD, ug/l	50U			
Endosulfan sulfate, ug/l	50U			
4,4'-DDT, ug/l	50U			
Endrin ketone, ug/l	50U			
Methoxychlor, ug/l	250U			
alpha-Chlordane, ug/l	25U			
gamma-Chlordane, ug/l	25U			
Toxaphene, ug/l	2500U			
Surrogate - DCB	0 %D			
Surrogate -	0 %D			
2,4,5,6-Tetrachloro-m-xylene (TCMX)				
Dilution Factor	500			
Prep Date	08.18.00			
Analysis Date	09.28.00			
Batch ID	0818R			



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Code: 111501011

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
--------	-------------------------------------	-------	--------------	------

PARAMETER

X = Due to failing surrogate recoveries, the sample was reextracted and reanalyzed. concurring results were obtained. Both sets of data are provided.

J = The flag "J" indicates the presence of a compound that meets the identification criteria, but the result is less than the sample RL and greater than the MDL.

U = Analyzed for but not detected.

D = Result is from a secondary dilution.

E (Organic) = Result exceeded the upper calibration limit.

B (Organic) = This flag is used when the analyte is found in the associated method blank as well as in the sample.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.

Angie Stewart, Project Manager

Serial Number

025771



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

000X 5102 LaFouche Avenue, Savannah, GA 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 500 Lakeside Drive, Mobile, AL 36695
 3712 Benjamin Rd., Suite 100, Tampa, FL 33634

Phone: (912) 254-7858 Fax: (912) 352-0165
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 Phone: (334) 666-6633 Fax: (334) 666-6696
 Phone: (813) 809-7427 Fax: (813) 805-7049

PROJECT REFERENCE Leachate Treatability	PROJECT NO 00523	PROJECT LOCATION (STATE) TN	MATRIX TYPE	REQUIRED ANALYSES							PAGE 3	OF 3		
PROJECT MANAGER Stewart	P.O. NUMBER	CONTRACT NO		TOC	CO ₂	SVOCs	VOC	Particulates	ROD	TKN			STANDARD REPORT DELIVERY	
CLIENT NAME Pat Campbell	CLIENT PHONE 615-377-4775	CLIENT FAX 615-377-4976											DATE DUE	
CLIENT EMAIL J.Baltz@adveritgroup.org	CLIENT ADDRESS 201 Summit View Dr., 3rd FL Brentwood, TN 37027	COMPANY CONTRACTING THIS WORK (if applicable)											EXPEDITED REPORT DELIVERY (SURCHARGE)	
SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (ICP-GFAAS CONC RATE) AQUEOUS WATER	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (CONC RATE)	NUMBER OF CONTAINERS SUBMITTED							DATE DUE
8/10/00		BioBatch1 - T=48	X				1	1					NUMBER OF CONTAINERS SUBMITTED PER SHIPMENT	
8/10/00		BioBatch2 - T=48	X				1	1						
8/10/00		BioBatch3 - T=48	X				1	1						
8/10/00		BioBatch 1 - T=54	X				1	1						
8/10/00		BioBatch 2 - T=54	X				1	1						
8/10/00		BioBatch 3 - T=54	X				1	1						
8/10/00		BioBatch1 - T=72	X				1	1						
8/10/00		BioBatch2 - T=72	X				1	1						
8/10/00		BioBatch3 - T=72	X				1	1						
8/11/00		BioBatch1 - T=76	X				1	1	4	3	2	1		
8/11/00		BioBatch2 - T=76	X				1	1	4	3	2	1		
8/11/00		BioBatch3 - T=76	X				1	1	4	3	2	1		
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME						
LABORATORY USE ONLY														
RECEIVED FOR LABORATORY BY	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STLCL LOG NO.	LABORATORY REMARKS								
K. Lamm	8/15/00	8:35	YES		SO-45521									



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

PROJECT REFERENCE <i>Leachate Testability</i>		PROJECT NO. 00523	PROJECT LOCATION (STATE) TN	MATRIX TYPE	REQUIRED ANALYSES								PAGE 1	OF 1			
STL (LAB) PROJECT MANAGER <i>A Stewart</i>		P.O. NUMBER	CONTRACT NO.										STANDARD REPORT DELIVERY				
CLIENT NAME / PM <i>Pat Campbell</i>		CLIENT PHONE 615-377-4775	CLIENT FAX 615-377-4976										DATE DUE				
CLIENT NAME <i>The Advent Group</i>		CLIENT EMAIL J.Batz@adventgroup.org											EXPEDITED REPORT DELIVERY (SURCHARGE)				
CLIENT ADDRESS 201 Summit View Dr, 3rd Fl Brentwood, TN 37027													DATE DUE				
COMPANY CONTRACTING THIS WORK (if applicable)													NUMBER OF COOLERS SUBMITTED PER SHIPMENT				
SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION		COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER), SOLID OR SEMISOLID	AIR	MONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED								REMARKS	
8/11/00		Soil Leachate		X				1	PCB-680	-	Post	cides	2	2			
RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>		DATE 7/20/00	TIME	RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>		DATE 8/11/00	TIME 5:30	RELINQUISHED BY: (SIGNATURE)								DATE	TIME
RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE) <i>[Signature]</i>		DATE	TIME	RECEIVED BY: (SIGNATURE)								DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: <i>K Conner</i>	DATE 8/15/00	TIME 8:35	CUSTODY INTACT YES NO	CUSTODY SEAL NO.	STL-SL LOG NO SL-05521	LABORATORY REMARKS:
--	-----------------	--------------	-----------------------------	---------------------	---------------------------	---------------------

ORIGINAL

TREATABILITY RESULTS FOR ACTIVATED SLUDGE BATCH TESTS (a)

PARAMETER	UNITS	SAMPLE INTERVAL (HOURS)								
		TIME = 0			TIME = 1			TIME = 2		
		UNIT 1	UNIT 2	UNIT 3	UNIT 1	UNIT 2	UNIT 3	UNIT 1	UNIT 2	UNIT 3
Conductivity	umhos/cm	2,380	2,320	1,680	2,340	2,280	1,630	2,360	2,290	1,700
D.O.	mg/L	9.1	9.1	8.0	9.4	9.2	8.6	9.5	9.4	9.2
Temp.	C	17	17	17	19	19	17	19	19	18
OUR	mg/L/hr	7.5	9.8	21.8	4.5	8.5	13.5	1.5	8.3	11.6
COD	mg/L	509	502	495	501	501	496	502	492	481
NH ₃ -N	mg/L	5.8	5.8	5.0	6.5	5.5	5.5	7.0	6.0	6.0
NO ₃ -N	mg/L	10	22.5	25						
NO ₂ -N	mg/L	0.075	0.075	0.1						
PO ₄ -P	mg/L	0.25	0.25	2						
MLSS	mg/L									
MLVSS	mg/L									
pH	s.u.	7.5	7.6	7.4	7.9	7.9	7.7	7.7	7.6	7.6

Notes:

(a) Analyses by ADVENT

TREATABILITY RESULTS FOR ACTIVATED SLUDGE BATCH TESTS (a)

PARAMETER	UNITS	SAMPLE INTERVAL (HOURS)								
		TIME = 4			TIME = 8			TIME = 14		
		UNIT 1	UNIT 2	UNIT 3	UNIT 1	UNIT 2	UNIT 3	UNIT 1	UNIT 2	UNIT 3
Conductivity	umhos/cm	2,380	2,270	1,760	2,340	2,380	1,690	2,410	2,390	1,770
D.O.	mg/L	9.3	9	8.6	9.2	8.9	8.3	9.1	8.9	8.3
Temp.	C	19.5	19	18.5	20	20	20	19	19	19
OUR	mg/L/hr	1.0	3.8	10.9	4.0	1.0	10.0	3.0	0.0	6.0
COD	mg/L	481	486	470	481	500	470	490	500	468
NH ₃ -N	mg/L	6.5	5.8	6.8	6.0	6.3	7.5	6.3	6.5	9.8
NO ₃ -N	mg/L				35	25	30			
NO ₂ -N	mg/L				0.0025	0.125	0.075			
PO ₄ -P	mg/L									
MLSS	mg/L									
MLVSS	mg/L									
pH	s.u.	7.9	7.8	7.6	7.8	7.8	7.7	7.9	7.8	7.7

TREATABILITY RESULTS FOR ACTIVATED SLUDGE BATCH TESTS (a)

PARAMETER	UNITS	SAMPLE INTERVAL (HOURS)								
		TIME = 24			TIME = 30			TIME = 48		
		UNIT 1	UNIT 2	UNIT 3	UNIT 1	UNIT 2	UNIT 3	UNIT 1	UNIT 2	UNIT 3
Conductivity	umhos/cm	2,600	2,580	1,930	2,640	2,610	1,940	2,470	2,440	1,700
D.O.	mg/L	9.7	9.8	9.4	9.4	9.1	8.2	10.2	9.6	9.1
Temp.	C	20	20	19	20	20	20	19	19	19
OUR	mg/L/hr	4.0	2.5	7.8	3.4	4.0	10.0	3.6	3.0	5.7
COD	mg/L	475	465	434	444	421	403	273	295	270
NH ₃ -N	mg/L	5.8	6.8	11.3	5.5	6.0	12.0	0.8	2.3	9.5
NO ₃ -N	mg/L	20	20	17.5				25	20	32.5
NO ₂ -N	mg/L									
PO ₄ -P	mg/L									
MLSS	mg/L	1,120	2,700	7,820						
MLVSS	mg/L	700	1,800	5,580						
pH	s.u.	7.7	7.5	7.6	7.4	7.4	7.5	7.9	7.7	7.6

TREATABILITY RESULTS FOR ACTIVATED SLUDGE BATCH TESTS (a)

PARAMETER	UNITS	SAMPLE INTERVAL (HOURS)								
		TIME = 54			TIME = 72			TIME = 76		
		UNIT 1	UNIT 2	UNIT 3	UNIT 1	UNIT 2	UNIT 3	UNIT 1	UNIT 2	UNIT 3
Conductivity	umhos/cm	2,540	2,430	1,930	2,410	2,300	1,840	2,400	2,320	1,800
D.O.	mg/L	9.9	9.8	9	9.6	9.5	9.2	8.4	8.7	8.9
Temp.	C	20	20	20	19.5	20.0	19.5	20	20.2	20.1
OUR	mg/L/hr	3.0	2.3	6.8	2.5	3.0	6.0			
COD	mg/L	280	295	267	276	294	261	263	264	271
NH ₃ -N	mg/L	1.8	3.3	10.5	2.0	3.5	11.8	1.8	3.5	12
NO ₃ -N	mg/L				27.5	25.0	27.5			
NO ₂ -N	mg/L									
PO ₄ -P	mg/L							5.0	6.8	21.3
MLSS	mg/L							1,100	1,860	7,660
MLVSS	mg/L							760	1,240	5,320
pH	s.u.	7.3	7.4	7.3	7.4	7.4	7.2	7.2	7.2	7.0

ATTACHMENT 6

ANALYTICAL DATA FOR BATCH OXIDATION TESTS





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LOG NO: S0-05878

Received: 29 AUG 00

Reported: 16 OCT 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 152101018

Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05878-1	Peroxide Oxidation pH4	08-25-00		SIL060
05878-1-DL	Peroxide Oxidation pH4	08-25-00		SIL060
05878-2	Peroxide Oxidation pH7	08-25-00		SIL060
05878-2-DL	Peroxide Oxidation pH7	08-25-00		SIL060
PARAMETER	05878-1 05878-1-DL	05878-2 05878-2-DL		
TCL Semivolatiles (8270)				
Phenol, ug/l	1.2J	---	720E	1000D
bis(2-Chloroethyl)ether, ug/l	10U	---	110	100U
2-Chlorophenol, ug/l	10U	---	180	190D
1,3-Dichlorobenzene, ug/l	3.5J	---	1.7J	100U
1,4-Dichlorobenzene, ug/l	3.4J	---	54	59DJ
1,2-Dichlorobenzene, ug/l	1.9J	---	41	45DJ
2-Methylphenol (o-Cresol), ug/l	10U	---	78	70DJ
2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether), ug/l	10U	---	10U	100U
3-Methylphenol/4-Methylphen ol (m&p-Cresol), ug/l	10U	---	150	140D
N-Nitroso-di-n-propylamine, ug/l	10U	---	10U	100U
Hexachloroethane, ug/l	1.9U	---	1.9U	19U
Nitrobenzene, ug/l	3.5U	---	19	18DJ
Isophorone, ug/l	10U	---	10U	100U
2-Nitrophenol, ug/l	10U	---	10U	100U
bis(2-Chloroethoxy)methane, ug/l	10U	---	10U	100U
2,4-Dichlorophenol, ug/l	1.0J	---	440E	480D



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05878-1	Peroxide Oxidation pH4	08-25-00		SIL060
05878-1-DL	Peroxide Oxidation pH4	08-25-00		SIL060
05878-2	Peroxide Oxidation pH7	08-25-00		SIL060
05878-2-DL	Peroxide Oxidation pH7	08-25-00		SIL060

PARAMETER	05878-1	05878-1-DL	05878-2	05878-2-DL
1,2,4-Trichlorobenzene, ug/l	35	---	210	250D
Naphthalene, ug/l	10U	---	410E	550D
4-Chloroaniline, ug/l	20U	---	88	200U
Hexachlorobutadiene, ug/l	10U	---	10U	100U
4-Chloro-3-methylphenol, ug/l	10U	---	10U	100U
2-Methylnaphthalene, ug/l	10U	---	10U	100U
Hexachlorocyclopentadiene, ug/l	10U	---	10U	100U
2,4,6-Trichlorophenol, ug/l	0.80J	---	200	260D
2,4,5-Trichlorophenol, ug/l	0.90J	---	54	70DJ
2-Chloronaphthalene, ug/l	10U	---	10U	100U
2-Nitroaniline, ug/l	50U	---	50U	500U
Dimethylphthalate, ug/l	10U	---	10U	16DJ
Acenaphthylene, ug/l	10U	---	10U	100U
3-Nitroaniline, ug/l	50U	---	50U	500U
Acenaphthene, ug/l	10U	---	10U	100U
2,4-Dinitrophenol, ug/l	14U	---	14U	140U
4-Nitrophenol, ug/l	50U	---	50U	500U
Dibenzofuran, ug/l	10U	---	10U	100U
2,4-Dinitrotoluene, ug/l	10U	---	10U	100U
2,6-Dinitrotoluene, ug/l	10U	---	10U	100U



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05878-1	Peroxide Oxidation pH4	08-25-00		SIL060
05878-1-DL	Peroxide Oxidation pH4	08-25-00		SIL060
05878-2	Peroxide Oxidation pH7	08-25-00		SIL060
05878-2-DL	Peroxide Oxidation pH7	08-25-00		SIL060

PARAMETER	05878-1	05878-1-DL	05878-2	05878-2-DL
Diethylphthalate, ug/l	10U	---	20	21DJ
4-Chlorophenylphenyl ether, ug/l	10U	---	10U	100U
Fluorene, ug/l	1.0U	---	1.0U	10U
4-Nitroaniline, ug/l	50U	---	50U	500U
4,6-Dinitro-2-methylphenol, ug/l	13U	---	13U	130U
N-Nitrosodiphenylamine, ug/l	5.0U	---	5.3	50U
4-Bromophenylphenyl ether, ug/l	1.0U	---	1.0U	10U
Hexachlorobenzene, ug/l	6.0J	---	1.8J	100U
Pentachlorophenol, ug/l	38	---	1700E	2700D
Phenanthrene, ug/l	10U	---	10U	100U
Anthracene, ug/l	10U	---	10U	100U
Di-n-butylphthalate, ug/l	0.93J	---	10U	100U
Fluoranthene, ug/l	0.80J	---	10U	100U
Pyrene, ug/l	1.3J	---	10U	100U
Butylbenzylphthalate, ug/l	0.97J	---	10U	100U
3,3'-Dichlorobenzidine, ug/l	20U	---	20U	200U
Benzo(a)anthracene, ug/l	0.75J	---	10U	100U
bis(2-Ethylhexyl)phthalate, ug/l	1.4J	---	1.8U	18U
Chrysene, ug/l	1.0J	---	10U	100U
Di-n-octylphthalate, ug/l	10U	---	10U	100U



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05878-1	Peroxide Oxidation pH4	08-25-00		SIL060
05878-1-DL	Peroxide Oxidation pH4	08-25-00		SIL060
05878-2	Peroxide Oxidation pH7	08-25-00		SIL060
05878-2-DL	Peroxide Oxidation pH7	08-25-00		SIL060
PARAMETER	05878-1	05878-1-DL	05878-2	05878-2-DL
Benzo(b)fluoranthene, ug/l	10U	---	10U	100U
Benzo(k)fluoranthene, ug/l	1.3J	---	10U	100U
Benzo(a)pyrene, ug/l	1.4J	---	10U	100U
Indeno(1,2,3-cd)pyrene, ug/l	10U	---	10U	100U
Dibenzo(a,h)anthracene, ug/l	10U	---	10U	100U
Benzo(g,h,i)perylene, ug/l	1.9J	---	10U	100U
Carbazole, ug/l	0.77J	---	3.4U	34U
Surrogate - Phenol-d5	91 %	---	69 %	*F33
Surrogate - 2-Fluorophenol	100 %	---	91 %	*F33
Surrogate - 2,4,6-Tribromophenol	100 %	---	87 %	100 %
Surrogate - Nitrobenzene - d5	100 %	---	109 %	*F33
Surrogate - 2-Fluorobiphenyl	87 %	---	63 %	*F33
Surrogate - Terphenyl-d14	92 %	---	33 %	*F33
Dilution Factor	1	---	1	10
Prep Date	08.31.00	---	08.31.00	08.31.00
Analysis Date	09.05.00	---	09.05.00	09.06.00
Batch ID	0831B	---	0831B	0831B



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05878-1	Peroxide Oxidation pH4	08-25-00		SIL060
05878-1-DL	Peroxide Oxidation pH4	08-25-00		SIL060
05878-2	Peroxide Oxidation pH7	08-25-00		SIL060
05878-2-DL	Peroxide Oxidation pH7	08-25-00		SIL060
PARAMETER	05878-1	05878-1-DL	05878-2	05878-2-DL
Chlorinated Herbicides (8151)				
2,4-D, ug/l	5.0U	---	650E	330D
Dalapon, ug/l	1200U	---	12000U	48000U
2,4-DB, ug/l	5.0U	---	50U	200U
Dicamba, ug/l	12U	---	120U	480U
Dichloroprop, ug/l	60U	---	600U	2400U
Dinoseb, ug/l	60U	---	600U	2400U
MCPP [(4-chloro-2-methylphenoxy)-acetic acid], ug/l	1200U	---	37000P	35000DJP
MCPP [2-(4-chloro-2-methylphenoxy)-propanoic acid], ug/l	1800P	---	12000U	48000U
Pentachlorophenol, ug/l	19P	---	300	200DJ
2,4,5-TP (Silvex), ug/l	5.0U	---	50U	200U
2,4,5-T, ug/l	5.0U	---	88P	69DJ
Surrogate-2,4-Dichlorophenyl acetic acid (DCAA)	0 %D	---	0 %D	0 %D
Dilution Factor	10	---	100	400
Prep Date	08.30.00	---	08.30.00	08.30.00
Analysis Date	09.29.00	---	09.09.00	09.29.00
Batch ID	0830Q	---	0830Q	0830Q



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Code: 152101018

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05878-1	Peroxide Oxidation pH4	08-25-00		SIL060
05878-1-DL	Peroxide Oxidation pH4	08-25-00		SIL060
05878-2	Peroxide Oxidation pH7	08-25-00		SIL060
05878-2-DL	Peroxide Oxidation pH7	08-25-00		SIL060
PARAMETER	05878-1 05878-1-DL	05878-2 05878-2-DL		
TCL Pesticides (8081)				
alpha-BHC, ug/l	0.039U	---	0.61	---
beta-BHC, ug/l	0.014U	---	0.014U	---
delta-BHC, ug/l	0.012U	---	0.012U	---
gamma-BHC (Lindane), ug/l	0.019U	---	0.019U	---
Heptachlor, ug/l	0.050U	---	0.050U	---
Aldrin, ug/l	0.050U	---	0.050U	---
Heptachlor epoxide, ug/l	0.050U	---	0.050U	---
Endosulfan I, ug/l	0.050U	---	0.050U	---
Dieldrin, ug/l	0.10U	---	0.10U	---
4,4'-DDE, ug/l	0.10U	---	0.10U	---
Endrin, ug/l	0.10U	---	0.032JP	---
Endrin aldehyde, ug/l	0.10U	---	0.10U	---
Endosulfan II, ug/l	0.10U	---	0.10U	---
4,4'-DDD, ug/l	0.10U	---	0.10U	---
Endosulfan sulfate, ug/l	0.10U	---	0.10U	---
4,4'-DDT, ug/l	0.10U	---	0.10U	---
Endrin ketone, ug/l	0.10U	---	0.10U	---
Methoxychlor, ug/l	0.50U	---	0.50U	---
alpha-Chlordane, ug/l	0.050U	---	0.050U	---



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Project: LEACHATE TREATABILITY
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Code: 152101018
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05878-1	Peroxide Oxidation pH4	08-25-00	SIL060
05878-1-DL	Peroxide Oxidation pH4	08-25-00	SIL060
05878-2	Peroxide Oxidation pH7	08-25-00	SIL060
05878-2-DL	Peroxide Oxidation pH7	08-25-00	SIL060
PARAMETER	05878-1	05878-1-DL	05878-2
gamma-Chlordane, ug/l	0.050U	---	0.050U
Toxaphene, ug/l	5.0U	---	5.0U
Surrogate - DCB	24 %	---	12 %
Surrogate -	48 %	---	104 %
2,4,5,6-Tetrachloro-m-xylene (TCMX)			
Dilution Factor	1	---	1
Prep Date	08.31.00	---	08.31.00
Analysis Date	09.18.00	---	09.18.00
Batch ID	0831P	---	0831P
Chemical Oxygen Demand (410.4), mg/l	350		1100
Dilution Factor	1	---	10
Prep Date	09.05.00	---	09.05.00
Analysis Date	09.06.00	---	09.06.00
Batch ID	0905B	---	0905B
Biochemical Oxygen Demand (5 Day) (405.1/5210B), mg/l	77		300
Dilution Factor	---		---
Prep Date	08.29.00	---	08.29.00
Analysis Date	08.29.00	---	08.29.00
Batch ID	0829A	---	0829A



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REPORT OF RESULTS

Page 8

DATE/

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05878-1	Peroxide Oxidation pH4	08-25-00	SIL060
05878-1-DL	Peroxide Oxidation pH4	08-25-00	SIL060
05878-2	Peroxide Oxidation pH7	08-25-00	SIL060
05878-2-DL	Peroxide Oxidation pH7	08-25-00	SIL060

PARAMETER	05878-1	05878-1-DL	05878-2	05878-2-DL
-----------	---------	------------	---------	------------

Total Organic Carbon (415.1), mg/l	140		340	
Dilution Factor	1	---	1	---
Prep Date	09.05.00	---	09.05.00	---
Analysis Date	09.05.00	---	09.05.00	---
Batch ID	0905B	---	0905B	---
Suspended Solids (160.2), mg/l	8.0		40	
Dilution Factor	1	---	1	---
Prep Date	08.29.00	---	08.29.00	---
Analysis Date	08.30.00	---	08.30.00	---
Batch ID	0829B	---	0829B	---



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05878-1	Peroxide Oxidation pH4	08-25-00		SIL060
05878-1-DL	Peroxide Oxidation pH4	08-25-00		SIL060
05878-2	Peroxide Oxidation pH7	08-25-00		SIL060
05878-2-DL	Peroxide Oxidation pH7	08-25-00		SIL060
PARAMETER	05878-1 05878-1-DL	05878-2 05878-2-DL		
Volatiles by GC/MS (8260)				
Chloromethane, ug/l	20U	40U	20U	200U
Bromomethane (Methyl bromide), ug/l	20U	39U	20U	200U
Vinyl chloride, ug/l	20U	40U	20U	200U
Chloroethane, ug/l	20U	40U	20U	200U
Methylene chloride (Dichloromethane), ug/l	9.4U	19U	9.4U	94U
Acetone, ug/l	1200E	910D	6400E	6000D
Carbon disulfide, ug/l	10U	20U	10U	100U
1,1-Dichloroethene, ug/l	10U	20U	10U	100U
1,1-Dichloroethane, ug/l	1.1J	20U	28	24DJ
Cis/Trans-1,2-Dichloroethene, ug/l	10U	20U	28	24DJ
Chloroform, ug/l	10U	20U	10U	100U
1,2-Dichloroethane, ug/l	10U	20U	10U	100U
2-Butanone (MEK), ug/l	50U	100U	89	500U
1,1,1-Trichloroethane, ug/l	61	38D	72	59DJ
Carbon tetrachloride, ug/l	10U	20U	10U	100U
Bromodichloromethane, ug/l	10U	20U	10U	100U
1,1,2,2-Tetrachloroethane, ug/l	10U	20U	10U	100U
1,2-Dichloropropane, ug/l	10U	20U	10U	100U



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LOG NO: S0-05878
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Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 152101018

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05878-1	Peroxide Oxidation pH4		08-25-00	SIL060
05878-1-DL	Peroxide Oxidation pH4		08-25-00	SIL060
05878-2	Peroxide Oxidation pH7		08-25-00	SIL060
05878-2-DL	Peroxide Oxidation pH7		08-25-00	SIL060
PARAMETER	05878-1	05878-1-DL	05878-2	05878-2-DL
trans-1,3-Dichloropropene, ug/l	10U	20U	10U	100U
Trichloroethene, ug/l	5.4U	11U	3.6J	54U
Dibromochloromethane, ug/l	10U	20U	10U	100U
1,1,2-Trichloroethane, ug/l	10U	20U	1.9J	100U
Benzene, ug/l	2.4U	4.8U	5.7	6.5DJ
cis-1,3-Dichloropropene, ug/l	2.0U	4.0U	2.0U	20U
Bromoform, ug/l	10U	20U	10U	100U
2-Hexanone, ug/l	50U	100U	50U	500U
4-Methyl-2-pentanone (MIBK), ug/l	50U	100U	150	500U
Tetrachloroethene, ug/l	10U	20U	10U	100U
Toluene, ug/l	10U	20U	3.5J	100U
Chlorobenzene, ug/l	1.5J	20U	29	24DJ
Ethylbenzene, ug/l	10U	20U	1.8J	100U
Styrene, ug/l	10U	20U	10U	100U
Xylenes, Total, ug/l	10U	20U	10U	100U
Surrogate - Toluene-d8	92 %	94 %	94 %	92 %
Surrogate - 4-Bromofluorobenzene	98 %	98 %	96 %	96 %
Surrogate - Dibromofluoromethane	96 %	98 %	94 %	92 %
Dilution Factor	2	4	2	20
Analysis Date	09.07.00	09.07.00	09.07.00	09.07.00
Batch ID	1L0907	1L0907	1L0907	1L0907



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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05878-1	Peroxide Oxidation pH4	08-25-00	SIL060
05878-1-DL	Peroxide Oxidation pH4	08-25-00	SIL060
05878-2	Peroxide Oxidation pH7	08-25-00	SIL060
05878-2-DL	Peroxide Oxidation pH7	08-25-00	SIL060

PARAMETER	05878-1	05878-1-DL	05878-2	05878-2-DL
Cyanide (335.3), mg/l	0.18		0.15	
Dilution Factor	1	---	1	---
Prep Date	09.06.00	---	09.06.00	---
Analysis Date	09.07.00	---	09.07.00	---
Batch ID	0906T	---	0906T	---



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05878-3	Peroxide Oxidation pH7 mixed	08-28-00	SIL060
05878-4	Peroxide Oxidation pH4 mixed	08-28-00	SIL060
PARAMETER	05878-3	05878-4	
Suspended Solids (160.2), mg/l	9000	2700	
Dilution Factor	1	1	
Prep Date	08.29.00	08.29.00	
Analysis Date	08.30.00	08.30.00	
Batch ID	0829B	0829B	



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Sampled By: Client
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
PARAMETER	05878-5	05878-6	05878-7
05878-5	Method Blank		SIL060
05878-6	Lab Control Standard & Recovery		SIL060
05878-7	LCS Accuracy Control Limit (%R)		SIL060
TCL Semivolatiles (8270)			
Phenol, ug/l	10U	81 %	33-122 %
bis(2-Chloroethyl)ether, ug/l	10U	---	---
2-Chlorophenol, ug/l	10U	84 %	38-115 %
1,3-Dichlorobenzene, ug/l	10U	---	---
1,4-Dichlorobenzene, ug/l	10U	66 %	27-130 %
1,2-Dichlorobenzene, ug/l	10U	---	---
2-Methylphenol (o-Cresol), ug/l	10U	---	---
2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether), ug/l	10U	---	---
3-Methylphenol/4-Methylphen ol (m&p-Cresol), ug/l	10U	---	---
N-Nitroso-di-n-propylamine, ug/l	10U	84 %	31-138 %
Hexachloroethane, ug/l	1.9U	---	---
Nitrobenzene, ug/l	3.5U	---	---
Isophorone, ug/l	10U	---	---
2-Nitrophenol, ug/l	10U	---	---
bis(2-Chloroethoxy)methane, ug/l	10U	---	---
2,4-Dichlorophenol, ug/l	10U	---	---
1,2,4-Trichlorobenzene, ug/l	10U	76 %	28-110 %



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Sampled By: Client
Code: 152101018
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
PARAMETER	05878-5	05878-6	05878-7
Naphthalene, ug/l	10U	---	---
4-Chloroaniline, ug/l	20U	---	---
Hexachlorobutadiene, ug/l	10U	---	---
4-Chloro-3-methylphenol, ug/l	10U	92 %	34-126 %
2-Methylnaphthalene, ug/l	10U	---	---
Hexachlorocyclopentadiene, ug/l	10U	---	---
2,4,6-Trichlorophenol, ug/l	2.1U	---	---
2,4,5-Trichlorophenol, ug/l	10U	---	---
2-Chloronaphthalene, ug/l	10U	---	---
2-Nitroaniline, ug/l	50U	---	---
Dimethylphthalate, ug/l	10U	---	---
Acenaphthylene, ug/l	10U	---	---
3-Nitroaniline, ug/l	50U	---	---
Acenaphthene, ug/l	10U	86 %	36-121 %
2,4-Dinitrophenol, ug/l	14U	---	---
4-Nitrophenol, ug/l	50U	63 %	12-143 %
Dibenzofuran, ug/l	10U	---	---
2,4-Dinitrotoluene, ug/l	10U	76 %	37-129 %
2,6-Dinitrotoluene, ug/l	10U	---	---
Diethylphthalate, ug/l	10U	---	---
4-Chlorophenylphenyl ether, ug/l	10U	---	---



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Project: LEACHATE TREATABILITY

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REPORT OF RESULTS

DATE/

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
--------	---	--------------	------

05878-5	Method Blank		SIL060
05878-6	Lab Control Standard & Recovery		SIL060
05878-7	LCS Accuracy Control Limit (%R)		SIL060

PARAMETER	05878-5	05878-6	05878-7
-----------	---------	---------	---------

Fluorene, ug/l	1.0U	---	---
4-Nitroaniline, ug/l	50U	---	---
4,6-Dinitro-2-methylphenol, ug/l	13U	---	---
N-Nitrosodiphenylamine, ug/l	5.0U	---	---
4-Bromophenylphenyl ether, ug/l	1.0U	---	---
Hexachlorobenzene, ug/l	10U	---	---
Pentachlorophenol, ug/l	5.0U	82 %	19-148 %
Phenanthrene, ug/l	10U	---	---
Anthracene, ug/l	10U	---	---
Di-n-butylphthalate, ug/l	10U	---	---
Fluoranthene, ug/l	10U	---	---
Pyrene, ug/l	10U	116 %	31-139 %
Butylbenzylphthalate, ug/l	10U	---	---
3,3'-Dichlorobenzidine, ug/l	20U	---	---
Benzo(a)anthracene, ug/l	10U	---	---
bis(2-Ethylhexyl)phthalate, ug/l	1.8U	---	---
Chrysene, ug/l	10U	---	---
Di-n-octylphthalate, ug/l	10U	---	---
Benzo(b)fluoranthene, ug/l	10U	---	---
Benzo(k)fluoranthene, ug/l	10U	---	---
Benzo(a)pyrene, ug/l	10U	---	---



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REPORT OF RESULTS

DATE/

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
PARAMETER	05878-5	05878-6	05878-7
05878-5	Method Blank		SIL060
05878-6	Lab Control Standard & Recovery		SIL060
05878-7	LCS Accuracy Control Limit (%R)		SIL060
Indeno(1,2,3-cd)pyrene, ug/l	10U	---	---
Dibenzo(a,h)anthracene, ug/l	10U	---	---
Benzo(g,h,i)perylene, ug/l	10U	---	---
Carbazole, ug/l	3.4U	---	---
Surrogate - Phenol-d5	90 %	91 %	25-128 %
Surrogate - 2-Fluorophenol	99 %	98 %	29-121 %
Surrogate - 2,4,6-Tribromophenol	82 %	82 %	29-143 %
Surrogate - Nitrobenzene - d5	94 %	94 %	34-130 %
Surrogate - 2-Fluorobiphenyl	88 %	86 %	36-124 %
Surrogate - Terphenyl-d14	114 %	112 %	14-148 %
Dilution Factor	1	1	---
Prep Date	08.31.00	08.31.00	---
Analysis Date	09.02.00	09.02.00	---
Batch ID	0831B	0831B	---



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Requisition: VEN203708

Project: LEACHATE TREATABILITY
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
05878-5	Method Blank		SIL060
05878-6	Lab Control Standard & Recovery		SIL060
05878-7	LCS Accuracy Control Limit (%R)		SIL060
PARAMETER	05878-5	05878-6	05878-7
Chlorinated Herbicides (8151)			
2,4-D, ug/l	0.50U	145 %	11-154 %
Dalapon, ug/l	120U	200 %	26-97 %
2,4-DB, ug/l	0.50U	140 %	55-167 %
Dicamba, ug/l	1.2U	82 %	38-152 %
Dichloroprop, ug/l	6.0U	90 %	27-209 %
Dinoseb, ug/l	6.0U	40 %	10-127 %
MCPA [(4-chloro-2-methylphenoxy)-acetic acid], ug/l	120U	95 %	20-150 %
MCPP [2-(4-chloro-2-methylphenoxy)-propanoic acid], ug/l	120U	150 %	10-164 %
Pentachlorophenol, ug/l	1.0U	90 %	11-110 %
2,4,5-TP (Silvex), ug/l	0.50U	100 %	10-100 %
2,4,5-T, ug/l	0.50U	108 %	25-128 %
Surrogate-2,4-Dichlorophenyl acetic acid (DCAA)	120 %	95 %	---
Dilution Factor	1	1	
Prep Date	08.30.00	08.30.00	---
Analysis Date	09.08.00	09.08.00	---
Batch ID	0830Q	0830Q	0830Q

TCL Pesticides (8081)

alpha-BHC, ug/l



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Client PO. No.: 4503148706

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Sampled By: Client

Code: 152101018

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REPORT OF RESULTS

DATE/

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
05878-5	Method Blank		SIL060
05878-6	Lab Control Standard & Recovery		SIL060
05878-7	LCS Accuracy Control Limit (%R)		SIL060
PARAMETER	05878-5 05878-6 05878-7		
Chemical Oxygen Demand (410.4), mg/l <20	108 %	90-110 %	
Dilution Factor	1	1	---
Prep Date	09.05.00	09.05.00	---
Analysis Date	09.06.00	09.06.00	---
Batch ID	0905B	0905B	---
Biochemical Oxygen Demand (5 Day) (405.1/5210B), mg/l	<2.0	106 %	85-115 %
Prep Date	08.29.00	08.29.00	---
Analysis Date	08.29.00	08.29.00	---
Batch ID	0829A	0829A	---
Total Organic Carbon (415.1), mg/l	1.0U	96 %	80-120 %
Dilution Factor	1	1	---
Prep Date	09.05.00	09.05.00	---
Analysis Date	09.05.00	09.05.00	---
Batch ID	0905B	0905B	---
Suspended Solids (160.2), mg/l	<5.0	97 %	80-120 %
Dilution Factor	1	1	---
Prep Date	08.29.00	08.29.00	---
Analysis Date	08.30.00	08.30.00	---
Batch ID	0829B	0829B	---



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REPORT OF RESULTS

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DATE/

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
05878-5	Method Blank		SIL060
05878-6	Lab Control Standard & Recovery		SIL060
05878-7	LCS Accuracy Control Limit (%R)		SIL060

PARAMETER	05878-5	05878-6	05878-7
-----------	---------	---------	---------

Volatiles by GC/MS (8260)

Chloromethane, ug/l	10U	78 %	34-145 %
Bromomethane (Methyl bromide), ug/l	9.8U	92 %	40-141 %
Vinyl chloride, ug/l	10U	78 %	43-142 %
Chloroethane, ug/l	10U	84 %	47-148 %
Methylene chloride (Dichloromethane), ug/l	4.7U	84 %	47-140 %
Acetone, ug/l	50U	86 %	32-174 %
Carbon disulfide, ug/l	5.0U	82 %	28-152 %
1,1-Dichloroethene, ug/l	5.0U	84 %	46-147 %
1,1-Dichloroethane, ug/l	5.0U	88 %	51-140 %
Cis/Trans-1,2-Dichloroethene, ug/l	5.0U	87 %	43-136 %
Chloroform, ug/l	5.0U	88 %	62-130 %
1,2-Dichloroethane, ug/l	5.0U	88 %	65-131 %
2-Butanone (MEK), ug/l	25U	73 %	42-167 %
1,1,1-Trichloroethane, ug/l	5.0U	96 %	69-120 %
Carbon tetrachloride, ug/l	5.0U	96 %	57-128 %
Bromodichloromethane, ug/l	5.0U	92 %	65-125 %
1,1,2,2-Tetrachloroethane, ug/l	5.0U	90 %	67-133 %
1,2-Dichloropropene, ug/l	5.0U	88 %	67-128 %



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REPORT OF RESULTS

DATE/

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
--------	---	--------------	------

05878-5	Method Blank		SIL060
05878-6	Lab Control Standard & Recovery		SIL060
05878-7	LCS Accuracy Control Limit (%R)		SIL060

PARAMETER	05878-5	05878-6	05878-7
trans-1,3-Dichloropropene, ug/l	5.0U	92 %	49-136 %
Trichloroethene, ug/l	2.7U	90 %	56-143 %
Dibromochloromethane, ug/l	5.0U	98 %	68-126 %
1,1,2-Trichloroethane, ug/l	5.0U	88 %	63-133 %
Benzene, ug/l	1.2U	90 %	62-135 %
cis-1,3-Dichloropropene, ug/l	1.0U	92 %	66-125 %
Bromoform, ug/l	5.0U	96 %	52-148 %
2-Hexanone, ug/l	25U	90 %	48-155 %
4-Methyl-2-pentanone (MIBK), ug/l	25U	79 %	50-150 %
Tetrachloroethene, ug/l	5.0U	96 %	60-148 %
Toluene, ug/l	5.0U	88 %	68-131 %
Chlorobenzene, ug/l	5.0U	90 %	72-127 %
Ethylbenzene, ug/l	5.0U	94 %	74-122 %
Styrene, ug/l	5.0U	92 %	66-130 %
Xylenes, Total, ug/l	5.0U	93 %	73-135 %
Surrogate - Toluene-d8	92 %	90 %	77-122 %
Surrogate - 4-Bromofluorobenzene	94 %	92 %	74-126 %
Surrogate - Dibromofluoromethane	94 %	90 %	70-130 %
Dilution Factor	1	1	---
Analysis Date	09.07.00	09.07.00	---
Batch ID	1L0907	1L0907	---



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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
05878-5	Method Blank		SIL060
05878-6	Lab Control Standard & Recovery		SIL060
05878-7	LCS Accuracy Control Limit (%R)		SIL060
PARAMETER	05878-5	05878-6	05878-7
Cyanide (335.3), mg/l	<0.010	109 %	85-115 %
Dilution Factor	1	1	---
Prep Date	09.06.00	09.06.00	---
Analysis Date	09.07.00	09.07.00	---
Batch ID	0906T	0906T	---

SW-846, Test Methods for Evaluating Solid Waste, Third Edition,
September 1986, and Updates I, II, IIIA, IIB, and III.
Code of Federal Regulations, Title 40, Part 136; Washington DC, July 1,
1997.

Angie Stewart, Project Manager



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Serial Number U25759

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 Phone: (813) 866-7427 Fax: (813) 835-7049

PROJECT REFERENCE <i>Leachate treatability</i>		PROJECT NO. 00523	PROJECT LOCATION (STATE) TN	MATRIX TYPE	REQUIRED ANALYSES							PAGE 1	OF 1					
INT'L (LAB) PROJECT MANAGER <i>Stewart</i>	P.O. NUMBER	CONTRACT NO.										STANDARD REPORT DELIVERY <input checked="" type="checkbox"/>						
CLIENT SITE/PM <i>Pat Campbell</i>	CLIENT PHONE 615-377-4775	CLIENT FAX 615-377-4976											DATE DUE					
CLIENT NAME <i>The Adventur Group</i>	CLIENT EMAIL J.Bailey@adventurgroup.org											EXPEDITED REPORT DELIVERY (SUPPLEMENT) <input type="checkbox"/>						
CLIENT ADDRESS <i>201 Summit View Dr., 3rd Floor Brentwood, TN 37027</i>											DATE DUE							
COMPANY CONTRACTING THIS WORK (if applicable):														NUMBER OF COOLERS SUBMITTED PER SHIPMENT: <input type="checkbox"/>				
SAMPLE DATE	TIME	SAMPLE IDENTIFICATION			COMPOSITE (G) OR GRAIN (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMI-SOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	Specimen	Pesticides	CO ₂	BOD	TOC	TSS	VOC	Cyanide	
8/25/00		Peroxide Oxidation pH 4			X					-	-							
8/25/00		Peroxide Oxidation pH 7			X					-	-	HCl	-	HCl				
8/25/00		Peroxide Oxidation pH 7 mixed			X													
8/28/00		Peroxide Oxidation pH 4 mixed			X													
RELINQUISHED BY: (SIGNATURE) <i>Swafford</i>	DATE 7/20/00	TIME 5:30pm	RELINQUISHED BY: (SIGNATURE) <i>Jason Bailey</i>	DATE 8/24/00	TIME 5:30pm	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME							
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME							
LABORATORY USE ONLY																		
RECEIVED FOR LABORATORY BY: <i>K. Currier</i>	DATE 8/29/00	TIME 845	CUSTODY INTACT YES NO	CUSTODY SEAL NO.	STL-SL LOG NO. Su-05878	LABORATORY REMARKS:												

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Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

LOG NO: S0-05976
Received: 01 SEP 00
Reported: 18 OCT 00
Revised: 02 NOV 00
Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 11420112
Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05976-1	Ozone Oxidation pH7	08-28-00		SIL061
05976-1-DL	Ozone Oxidation pH7	08-28-00		SIL061
05976-2	Ozone Oxidation pH9	08-31-00		SIL061
05976-2-DL	Ozone Oxidation pH9	08-31-00		SIL061
PARAMETER	05976-1 05976-1-DL	05976-2 05976-2-DL		
TCL Semivolatiles (8270)				
Phenol, ug/l	4600E	4400D	5500E	4900D
bis(2-Chloroethyl)ether, ug/l	100U	400U	100U	400U
2-Chlorophenol, ug/l	360	310DJ	540	460D
1,3-Dichlorobenzene, ug/l	100U	400U	100U	400U
1,4-Dichlorobenzene, ug/l	100U	400U	100U	400U
1,2-Dichlorobenzene, ug/l	9.7J	400U	100U	400U
2-Methylphenol (o-Cresol), ug/l	110	99DJ	150	110DJ
2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether), ug/l	100U	400U	100U	400U
3-Methylphenol/4-Methylphen ol (m&p-Cresol), ug/l	590	420D	100U	510D
N-Nitroso-di-n-propylamine, ug/l	100U	400U	100U	400U
Hexachloroethane, ug/l	19U	76U	19U	76U
Nitrobenzene, ug/l	20J	140U	42	140U
Isophorone, ug/l	100U	400U	100U	400U
2-Nitrophenol, ug/l	100U	400U	100U	400U
2,4-Dimethylphenol, ug/l	100U	400U	100U	400U
bis(2-Chloroethoxy)methane, ug/l	100U	400U	100U	400U

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#	
05976-1	Ozone Oxidation pH7		08-28-00	SIL061	
05976-1-DL	Ozone Oxidation pH7		08-28-00	SIL061	
05976-2	Ozone Oxidation pH9		08-31-00	SIL061	
05976-2-DL	Ozone Oxidation pH9		08-31-00	SIL061	
PARAMETER		05976-1	05976-1-DL	05976-2	05976-2-DL
2,4-Dichlorophenol, ug/l	1300	1000D	1800	1500D	
1,2,4-Trichlorobenzene, ug/l	10J	400U	15J	400U	
Naphthalene, ug/l	100U	400U	100U	400U	
4-Chloroaniline, ug/l	3700E	4200D	7200E	3900D	
Hexachlorobutadiene, ug/l	100U	400U	100U	400U	
4-Chloro-3-methylphenol, ug/l	100U	400U	100U	400U	
2-Methylnaphthalene, ug/l	100U	400U	100U	400U	
Hexachlorocyclopentadiene, ug/l	100U	400U	100U	400U	
2,4,6-Trichlorophenol, ug/l	830	790D	950	1100D	
2,4,5-Trichlorophenol, ug/l	55J	400U	100U	400U	
2-Chloronaphthalene, ug/l	100U	400U	100U	400U	
2-Nitroaniline, ug/l	500U	2000U	500U	2000U	
Dimethylphthalate, ug/l	100U	400U	100U	400U	
Acenaphthylene, ug/l	100U	400U	100U	400U	
3-Nitroaniline, ug/l	500U	2000U	500U	2000U	
Acenaphthene, ug/l	100U	400U	100U	400U	
2,4-Dinitrophenol, ug/l	140U	560U	140U	560U	
4-Nitrophenol, ug/l	260J	2000U	500U	2000U	
Dibenzofuran, ug/l	100U	400U	100U	400U	
2,4-Dinitrotoluene, ug/l	100U	400U	100U	400U	

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05976-1	Ozone Oxidation pH7	08-28-00	SIL061
05976-1-DL	Ozone Oxidation pH7	08-28-00	SIL061
05976-2	Ozone Oxidation pH9	08-31-00	SIL061
05976-2-DL	Ozone Oxidation pH9	08-31-00	SIL061
PARAMETER	05976-1 05976-1-DL 05976-2 05976-2-DL		
2,6-Dinitrotoluene, ug/l	100U 400U 100U 400U		
Diethylphthalate, ug/l	65J 50DJ 80J 400U		
4-Chlorophenylphenyl ether, ug/l	100U 400U 100U 400U		
Fluorene, ug/l	10U 40U 10U 40U		
4-Nitroaniline, ug/l	500U 2000U 500U 2000U		
4,6-Dinitro-2-methylphenol, ug/l	130U 520U 130U 520U		
N-Nitrosodiphenylamine, ug/l	50U 200U 50U 200U		
4-Bromophenylphenyl ether, ug/l	10U 40U 10U 40U		
Hexachlorobenzene, ug/l	23J 400U 30J 400U		
Pentachlorophenol, ug/l	5100E 6200D 6100E 8100D		
Phenanthrene, ug/l	100U 400U 100U 400U		
Anthracene, ug/l	100U 400U 100U 400U		
Di-n-butylphthalate, ug/l	100U 400U 100U 400U		
Fluoranthene, ug/l	100U 400U 100U 400U		
Pyrene, ug/l	100U 400U 100U 400U		
Butylbenzylphthalate, ug/l	100U 400U 100U 400U		
3,3'-Dichlorobenzidine, ug/l	200U 800U 200U 800U		
Benzo(a)anthracene, ug/l	100U 400U 100U 400U		
bis(2-Ethylhexyl)phthalate, ug/l	8.5JB 33DJB 18U 44DJB		
Chrysene, ug/l	100U 400U 100U 400U		

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#	
05976-1	Ozone Oxidation pH7		08-28-00	SIL061	
05976-1-DL	Ozone Oxidation pH7		08-28-00	SIL061	
05976-2	Ozone Oxidation pH9		08-31-00	SIL061	
05976-2-DL	Ozone Oxidation pH9		08-31-00	SIL061	
PARAMETER		05976-1	05976-1-DL	05976-2	05976-2-DL
Di-n-octylphthalate, ug/l	4.4J	400U	100U	400U	
Benzo(b)fluoranthene, ug/l	100U	400U	100U	400U	
Benzo(k)fluoranthene, ug/l	100U	400U	100U	400U	
Benzo(a)pyrene, ug/l	100U	400U	100U	400U	
Indeno(1,2,3-cd)pyrene, ug/l	100U	400U	100U	400U	
Dibenzo(a,h)anthracene, ug/l	100U	400U	100U	400U	
Benzo(g,h,i)perylene, ug/l	100U	400U	100U	400U	
Carbazole, ug/l	34U	140U	34U	140U	
Surrogate - Phenol-d5	OD %	OD %	OD %	OD %	
Surrogate - 2-Fluorophenol	OD %	OD %	OD %	OD %	
Surrogate - 2,4,6-Tribromophenol	OD %	OD %	OD %	OD %	
Surrogate - Nitrobenzene - d5	OD %	OD %	OD %	OD %	
Surrogate - 2-Fluorobiphenyl	OD %	OD %	OD %	OD %	
Surrogate - Terphenyl-d14	OD %	OD %	OD %	OD %	
Dilution Factor	10	40	10	40	
Prep Date	09.05.00	09.05.00	09.05.00	09.05.00	
Analysis Date	09.22.00	09.14.00	09.22.00	09.14.00	
Batch ID	0905C	0905C	0905C	0905C	

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE /	TIME SAMPLED	SDG#	
05976-1	Ozone Oxidation pH7		08-28-00	SIL061	
05976-1-DL	Ozone Oxidation pH7		08-28-00	SIL061	
05976-2	Ozone Oxidation pH9		08-31-00	SIL061	
05976-2-DL	Ozone Oxidation pH9		08-31-00	SIL061	
PARAMETER		05976-1	05976-1-DL	05976-2	05976-2-DL
Chlorinated Herbicides (8151)					
2,4-D, ug/l	1400EP	1400D	1700EP	1500D	
Dalapon, ug/l	12000U	120000U	12000U	120000U	
2,4-DB, ug/l	50U	500U	50U	500U	
Dicamba, ug/l	120U	1200U	120U	1200U	
Dichloroprop, ug/l	600U	6000U	600U	6000U	
Dinoseb, ug/l	600U	6000U	600U	6000U	
MCPA [(4-chloro-2-methylphen oxy)-acetic acid], ug/l	100000EP	160000DP	91000EP	130000DP	
MCPP [2-(4-chloro-2-methylphenoxy)-propanoic acid], ug/l	11000JP	120000U	12000U	120000U	
Pentachlorophenol, ug/l	320	320DJ	390	300DJ	
2,4,5-TP (Silvex), ug/l	50U	500U	50U	500U	
2,4,5-T, ug/l	370P	210DJP	320P	120DJP	
Surrogate-2,4-Dichlorophenyl acetic acid (DCAA)	0 %D	0 %D	0 %D	0 %D	
Dilution Factor	100	1000	100	1000	
Prep Date	09.05.00	09.05.00	09.05.00	09.05.00	
Analysis Date	09.09.00	09.29.00	09.09.00	09.29.00	
Batch ID	0905N	0905N	0905N	0905N	

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05976-1	Ozone Oxidation pH7	08-28-00		SIL061
05976-1-DL	Ozone Oxidation pH7	08-28-00		SIL061
05976-2	Ozone Oxidation pH9	08-31-00		SIL061
05976-2-DL	Ozone Oxidation pH9	08-31-00		SIL061
PARAMETER	05976-1 05976-1-DL	05976-2 05976-2-DL		
TCL Pesticides (8081)				
alpha-BHC, ug/l	0.43P	---	1.3	---
beta-BHC, ug/l	0.070U	---	0.070U	---
delta-BHC, ug/l	0.060U	---	0.060U	---
gamma-BHC (Lindane), ug/l	0.095U	---	0.095U	---
Heptachlor, ug/l	0.25U	---	0.25U	---
Aldrin, ug/l	0.25U	---	0.25U	---
Heptachlor epoxide, ug/l	0.25U	---	0.25U	---
Endosulfan I, ug/l	0.25U	---	0.25U	---
Dieldrin, ug/l	0.50U	---	0.50U	---
4,4'-DDE, ug/l	0.50U	---	0.50U	---
Endrin, ug/l	0.50U	---	0.50U	---
Endrin aldehyde, ug/l	0.50U	---	0.50U	---
Endosulfan II, ug/l	0.50U	---	0.50U	---
4,4'-DDD, ug/l	0.50U	---	0.50U	---
Endosulfan sulfate, ug/l	0.50U	---	0.50U	---
4,4'-DDT, ug/l	0.50U	---	0.50U	---
Endrin ketone, ug/l	0.50U	---	0.50U	---
Methoxychlor, ug/l	2.5U	---	2.5U	---
alpha-Chlordane, ug/l	0.25U	---	0.25U	---

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05976-1	Ozone Oxidation pH7	08-28-00		SIL061
05976-1-DL	Ozone Oxidation pH7	08-28-00		SIL061
05976-2	Ozone Oxidation pH9	08-31-00		SIL061
05976-2-DL	Ozone Oxidation pH9	08-31-00		SIL061
PARAMETER	05976-1 05976-1-DL	05976-2 05976-2-DL		
gamma-Chlordane, ug/l	0.25U	---	0.25U	---
Toxaphene, ug/l	25U	---	25U	---
Surrogate - DCB	26 %	---	14 %	---
Surrogate -	88 %	---	50 %	---
2,4,5,6-Tetrachloro-m-xylene (TCMX)				
Dilution Factor	5	---	5	---
Prep Date	09.05.00	---	09.05.00	---
Analysis Date	09.12.00	---	09.11.00	---
Batch ID	0905P	---	0905P	---
Chemical Oxygen Demand (410.4), mg/l	1700		1600	
Dilution Factor	10	---	10	---
Prep Date	09.05.00	---	09.05.00	---
Analysis Date	09.06.00	---	09.06.00	---
Batch ID	0905B	---	0905B	---
Biochemical Oxygen Demand (5 Day) (405.1/5210B), mg/l	480		520	
Dilution Factor	---		---	
Prep Date	09.01.00	---	09.01.00	---
Analysis Date	09.01.00	---	09.01.00	---
Batch ID	0901A	---	0901A	---

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REPORT OF RESULTS

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05976-1	Ozone Oxidation pH7	08-28-00		SIL061
05976-1-DL	Ozone Oxidation pH7	08-28-00		SIL061
05976-2	Ozone Oxidation pH9	08-31-00		SIL061
05976-2-DL	Ozone Oxidation pH9	08-31-00		SIL061
PARAMETER	05976-1 05976-1-DL	05976-2 05976-2-DL		
Total Organic Carbon (415.1), mg/l	450	480		
Dilution Factor	1	---	1	---
Prep Date	09.07.00	---	09.07.00	---
Analysis Date	09.07.00	---	09.07.00	---
Batch ID	0907A	---	0907A	---
Suspended Solids (160.2), mg/l	57	59		
Dilution Factor	1	---	1	---
Prep Date	09.01.00	---	09.01.00	---
Analysis Date	09.02.00	---	09.02.00	---
Batch ID	0901C	---	0901C	---

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
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05976-1-DL	Ozone Oxidation pH7		08-28-00	SIL061
05976-2	Ozone Oxidation pH9		08-31-00	SIL061
05976-2-DL	Ozone Oxidation pH9		08-31-00	SIL061
PARAMETER	05976-1 05976-1-DL	05976-2 05976-2-DL		
Volatiles by GC/MS (8260)				
Chloromethane, ug/l	20U	100U	20U	100U
Bromomethane (Methyl bromide), ug/l	20U	98U	20U	98U
Vinyl chloride, ug/l	20U	100U	20U	100U
Chloroethane, ug/l	20U	100U	20U	100U
Methylene chloride (Dichloromethane), ug/l	9.4U	47U	9.4U	47U
Acetone, ug/l	2000E	1600D	2700E	2400D
Carbon disulfide, ug/l	10U	50U	10U	50U
1,1-Dichloroethene, ug/l	10U	50U	10U	50U
1,1-Dichloroethane, ug/l	10U	50U	10U	50U
Cis/Trans-1,2-Dichloroethene, ug/l	10U	50U	10U	50U
Chloroform, ug/l	10U	50U	10U	50U
1,2-Dichloroethane, ug/l	10U	50U	10U	50U
2-Butanone (MEK), ug/l	35J	250U	30J	250U
1,1,1-Trichloroethane, ug/l	10U	50U	10U	50U
Carbon tetrachloride, ug/l	10U	50U	10U	50U
Bromodichloromethane, ug/l	10U	50U	10U	50U
1,1,2,2-Tetrachloroethane, ug/l	10U	50U	10U	50U
1,2-Dichloropropane, ug/l	10U	50U	10U	50U

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05976-2	Ozone Oxidation pH9		08-31-00	SIL061
05976-2-DL	Ozone Oxidation pH9		08-31-00	SIL061
PARAMETER	05976-1 05976-1-DL 05976-2 05976-2-DL			
trans-1,3-Dichloropropene, ug/l	10U 50U 10U 50U			
Trichloroethene, ug/l	5.4U 27U 5.4U 27U			
Dibromochloromethane, ug/l	10U 50U 10U 50U			
1,1,2-Trichloroethane, ug/l	10U 50U 10U 50U			
Benzene, ug/l	2.4U 12U 2.4U 12U			
cis-1,3-Dichloropropene, ug/l	2.0U 10U 2.0U 10U			
Bromoform, ug/l	10U 50U 10U 50U			
2-Hexanone, ug/l	50U 250U 50U 250U			
4-Methyl-2-pentanone (MIBK), ug/l	50U 250U 30J 250U			
Tetrachloroethene, ug/l	10U 50U 10U 50U			
Toluene, ug/l	10U 50U 10U 50U			
Chlorobenzene, ug/l	5.6J 8.1DJ 4.1J 6.5DJ			
Ethylbenzene, ug/l	10U 50U 10U 50U			
Styrene, ug/l	10U 50U 10U 50U			
Xylenes, Total, ug/l	10U 50U 10U 50U			
Surrogate - Toluene-d8	92 % 94 % 94 % 92 %			
Surrogate - 4-Bromofluorobenzene	94 % 96 % 88 % 98 %			
Surrogate - Dibromofluoromethane	96 % 96 % 84 % 96 %			
Dilution Factor	2 10 2 10			
Analysis Date	09.07.00 09.07.00 09.07.00 09.08.00			
Batch ID	1L0907 1L0907 1L0907 1L0908			

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Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

LOG NO: S0-05976
Received: 01 SEP 00
Reported: 18 OCT 00
Revised: 02 NOV 00
Client PO. No.: 4503148706
Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 11420112
Page 11

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE /	TIME SAMPLED	SDG#
05976-1	Ozone Oxidation pH7	08-28-00		SIL061
05976-1-DL	Ozone Oxidation pH7	08-28-00		SIL061
05976-2	Ozone Oxidation pH9	08-31-00		SIL061
05976-2-DL	Ozone Oxidation pH9	08-31-00		SIL061
PARAMETER	05976-1	05976-1-DL	05976-2	05976-2-DL
Cyanide (335.3), mg/l	0.021		0.013	
Dilution Factor	1	---	1	---
Prep Date	09.06.00	---	09.06.00	---
Analysis Date	09.06.00	---	09.06.00	---
Batch ID	0906S	---	0906S	---

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Project: LEACHATE TREATABILITY
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Code: 11420112
Page 12

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05976-3	Ozone Oxidation pH7 mixed		08-28-00	SIL061
05976-4	Ozone Oxidation pH9 mixed		08-31-00	SIL061
PARAMETER				
	05976-3 05976-4			
Suspended Solids (160.2), mg/l	1200 12000			
Dilution Factor	1 1			
Prep Date	09.01.00 09.01.00			
Analysis Date	09.02.00 09.02.00			
Batch ID	0901C 0901C			

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Project: LEACHATE TREATABILITY
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05976-5	Trip Blank		08-31-00	SIL061
<hr/>				
PARAMETER	05976-5			
<hr/>				
Volatile by GC/MS (8260)				
Chloromethane, ug/l	10U			
Bromomethane (Methyl bromide), ug/l	9.8U			
Vinyl chloride, ug/l	10U			
Chloroethane, ug/l	10U			
Methylene chloride (Dichloromethane), ug/l	4.7U			
Acetone, ug/l	50U			
Carbon disulfide, ug/l	5.0U			
1,1-Dichloroethene, ug/l	5.0U			
1,1-Dichloroethane, ug/l	5.0U			
Cis/Trans-1,2-Dichloroethene, ug/l	5.0U			
Chloroform, ug/l	5.0U			
1,2-Dichloroethane, ug/l	5.0U			
2-Butanone (MEK), ug/l	25U			
1,1,1-Trichloroethane, ug/l	5.0U			
Carbon tetrachloride, ug/l	5.0U			
Bromodichloromethane, ug/l	5.0U			
1,1,2,2-Tetrachloroethane, ug/l	5.0U			
1,2-Dichloropropane, ug/l	5.0U			
trans-1,3-Dichloropropene, ug/l	5.0U			
Trichloroethene, ug/l	2.7U			
<hr/>				

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Sampled By: Client

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
05976-5	Trip Blank		08-31-00	SIL061
PARAMETER	05976-5			
Dibromochloromethane, ug/l	5.0U			
1,1,2-Trichloroethane, ug/l	5.0U			
Benzene, ug/l	1.2U			
cis-1,3-Dichloropropene, ug/l	1.0U			
Bromoform, ug/l	5.0U			
2-Hexanone, ug/l	25U			
4-Methyl-2-pentanone (MIBK), ug/l	25U			
Tetrachloroethene, ug/l	5.0U			
Toluene, ug/l	5.0U			
Chlorobenzene, ug/l	5.0U			
Ethylbenzene, ug/l	5.0U			
Styrene, ug/l	5.0U			
Xylenes, Total, ug/l	5.0U			
Surrogate - Toluene-d8	90 %			
Surrogate - 4-Bromofluorobenzene	98 %			
Surrogate - Dibromofluoromethane	96 %			
Dilution Factor	1			
Analysis Date	09.08.00			
Batch ID	1L0908			

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 Sampled By: Client

Code: 11420112

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REPORT OF RESULTS

DATE/

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
05976-6	Method Blank		SIL061
05976-7	Lab Control Standard & Recovery		SIL061
05976-8	LCS Accuracy Control Limit (%R)		SIL061

PARAMETER	05976-6	05976-7	05976-8
TCL Semivolatiles (8270)			
Phenol, ug/l	10U	81 %	33-122 %
bis(2-Chloroethyl)ether, ug/l	10U	---	---
2-Chlorophenol, ug/l	10U	88 %	38-115 %
1,3-Dichlorobenzene, ug/l	10U	---	---
1,4-Dichlorobenzene, ug/l	10U	70 %	27-130 %
1,2-Dichlorobenzene, ug/l	10U	---	---
2-Methylphenol (o-Cresol), ug/l	10U	---	---
2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether), ug/l	10U	---	---
3-Methylphenol/4-Methylphen ol (m&p-Cresol), ug/l	10U	---	---
N-Nitroso-di-n-propylamine, ug/l	10U	92 %	31-138 %
Hexachloroethane, ug/l	1.9U	---	---
Nitrobenzene, ug/l	3.5U	---	---
Isophorone, ug/l	10U	---	---
2-Nitrophenol, ug/l	10U	---	---
2,4-Dimethylphenol, ug/l	10U	---	---
bis(2-Chloroethoxy)methane, ug/l	10U	---	---
2,4-Dichlorophenol, ug/l	10U	---	---

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Project: LEACHATE TREATABILITY
 Sampled By: Client
 Code: 11420112
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
PARAMETER	05976-6	05976-7	05976-8
05976-6 Method Blank			SIL061
05976-7 Lab Control Standard & Recovery			SIL061
05976-8 LCS Accuracy Control Limit (%R)			SIL061
1,2,4-Trichlorobenzene, ug/l	10U	82 %	28-110 %
Naphthalene, ug/l	10U	---	---
4-Chloroaniline, ug/l	20U	---	---
Hexachlorobutadiene, ug/l	10U	---	---
4-Chloro-3-methylphenol, ug/l	10U	96 %	34-126 %
2-Methylnaphthalene, ug/l	10U	---	---
Hexachlorocyclopentadiene, ug/l	10U	---	---
2,4,6-Trichlorophenol, ug/l	2.1U	---	---
2,4,5-Trichlorophenol, ug/l	10U	---	---
2-Chloronaphthalene, ug/l	10U	---	---
2-Nitroaniline, ug/l	50U	---	---
Dimethylphthalate, ug/l	10U	---	---
Acenaphthylene, ug/l	10U	---	---
3-Nitroaniline, ug/l	50U	---	---
Acenaphthene, ug/l	10U	90 %	36-121 %
2,4-Dinitrophenol, ug/l	14U	---	---
4-Nitrophenol, ug/l	50U	82 %	12-143 %
Dibenzofuran, ug/l	10U	---	---
2,4-Dinitrotoluene, ug/l	10U	86 %	37-129 %
2,6-Dinitrotoluene, ug/l	10U	---	---
Diethylphthalate, ug/l	10U	---	---

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
05976-6	Method Blank		SIL061
05976-7	Lab Control Standard & Recovery		SIL061
05976-8	LCS Accuracy Control Limit (%R)		SIL061
PARAMETER	05976-6 05976-7 05976-8		
4-Chlorophenylphenyl ether, ug/l	10U	---	---
Fluorene, ug/l	1.0U	---	---
4-Nitroaniline, ug/l	50U	---	---
4,6-Dinitro-2-methylphenol, ug/l	13U	---	---
N-Nitrosodiphenylamine, ug/l	5.0U	---	---
4-Bromophenylphenyl ether, ug/l	1.0U	---	---
Hexachlorobenzene, ug/l	10U	---	---
Pentachlorophenol, ug/l	5.0U	96 % 19-148 %	
Phenanthrene, ug/l	10U	---	---
Anthracene, ug/l	10U	---	---
Di-n-butylphthalate, ug/l	0.94J	---	---
Fluoranthene, ug/l	10U	---	---
Pyrene, ug/l	10U	114 % 31-139 %	
Butylbenzylphthalate, ug/l	0.44J	---	---
3,3'-Dichlorobenzidine, ug/l	20U	---	---
Benzo(a)anthracene, ug/l	10U	---	---
bis(2-Ethylhexyl)phthalate, ug/l	1.2J	---	---
Chrysene, ug/l	10U	---	---
Di-n-octylphthalate, ug/l	10U	---	---
Benzo(b)fluoranthene, ug/l	10U	---	---
Benzo(k)fluoranthene, ug/l	10U	---	---

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Sampled By: Client
Code: 11420112
Page 18

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
05976-6	Method Blank		SIL061
05976-7	Lab Control Standard & Recovery		SIL061
05976-8	LCS Accuracy Control Limit (%R)		SIL061
PARAMETER	05976-6	05976-7	05976-8
Benzo(a)pyrene, ug/l	10U	---	---
Indeno(1,2,3-cd)pyrene, ug/l	10U	---	---
Dibenzo(a,h)anthracene, ug/l	10U	---	---
Benzo(g,h,i)perylene, ug/l	10U	---	---
Carbazole, ug/l	3.4U	---	---
Surrogate - Phenol-d5	97 %	94 %	25-128 %
Surrogate - 2-Fluorophenol	110 %	110 %	29-121 %
Surrogate - 2,4,6-Tribromophenol	110 %	110 %	29-143 %
Surrogate - Nitrobenzene - d5	96 %	102 %	34-130 %
Surrogate - 2-Fluorobiphenyl	92 %	98 %	36-124 %
Surrogate - Terphenyl-d14	134 %	132 %	14-148 %
Dilution Factor	1	1	---
Prep Date	09.05.00	09.05.00	---
Analysis Date	09.13.00	09.13.00	---
Batch ID	0905C	0905C	---

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Project: LEACHATE TREATABILITY
 Sampled By: Client
 Code: 11420112
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
PARAMETER	05976-6	05976-7	05976-8
Chlorinated Herbicides (8151)			
2,4-D, ug/l	0.50U	120 %	11-154 %
Dalapon, ug/l	120U	82 %	26-97 %
2,4-DB, ug/l	0.50U	118 %	55-167 %
Dicamba, ug/l	1.2U	80 %	38-152 %
Dichloroprop, ug/l	6.0U	98 %	27-209 %
Dinoseb, ug/l	6.0U	32 %	10-127 %
MCPA [(4-chloro-2-methylphenoxy)-acetic acid], ug/l	120U	92 %	20-150 %
MCPP [2-(4-chloro-2-methylphenoxy)-propanoic acid], ug/l	120U	155 %	10-164 %
Pentachlorophenol, ug/l	1.0U	85 %	11-110 %
2,4,5-TP (Silvex), ug/l	0.50U	98 %	10-100 %
2,4,5-T, ug/l	0.50U	92 %	25-128 %
Surrogate-2,4-Dichlorophenyl acetic acid (DCAA)	102 %	100 %	27-133 %
Dilution Factor	1	1	---
Prep Date	09.05.00	09.05.00	---
Analysis Date	09.08.00	09.08.00	---
Batch ID	0905N	0905N	---

LOG NO: S0-05976
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Requisition: VEN203708

Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 11420112
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
05976-6	Method Blank		SIL061
05976-7	Lab Control Standard & Recovery		SIL061
05976-8	LCS Accuracy Control Limit (%R)		SIL061
PARAMETER	05976-6	05976-7	05976-8
Chemical Oxygen Demand (410.4), mg/l	20U	108 %	90-110 %
Dilution Factor	1	1	---
Prep Date	09.05.00	09.05.00	---
Analysis Date	09.06.00	09.06.00	---
Batch ID	0905B	0905B	---
Biochemical Oxygen Demand (5 Day) (405.1/5210B), mg/l	2.0U	102 %	85-115 %
Prep Date	09.01.00	09.01.00	---
Analysis Date	09.01.00	09.01.00	---
Batch ID	0901A	0901A	---
Total Organic Carbon (415.1), mg/l	1.0U	99 %	80-120 %
Dilution Factor	1	1	---
Prep Date	09.07.00	09.07.00	---
Analysis Date	09.07.00	09.07.00	---
Batch ID	0907A	0907A	---
Suspended Solids (160.2), mg/l	5.0U	98 %	80-120 %
Dilution Factor	1	1	---
Prep Date	09.01.00	09.01.00	---
Analysis Date	09.02.00	09.02.00	---
Batch ID	0901C	0901C	---

LOG NO: S0-05976

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Client PO. No.: 4503148706

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
PARAMETER		05976-6 05976-7 05976-8	
05976-6	Method Blank		SIL061
05976-7	Lab Control Standard & Recovery		SIL061
05976-8	LCS Accuracy Control Limit (%R)		SIL061
Volatiles by GC/MS (8260)			
Chloromethane, ug/l	10U	78 % 34-145 %	
Bromomethane (Methyl bromide), ug/l	9.8U	92 % 40-141 %	
Vinyl chloride, ug/l	10U	78 % 43-142 %	
Chloroethane, ug/l	10U	84 % 47-148 %	
Methylene chloride (Dichloromethane), ug/l	4.7U	84 % 47-140 %	
Acetone, ug/l	50U	86 % 32-174 %	
Carbon disulfide, ug/l	5.0U	82 % 28-152 %	
1,1-Dichloroethene, ug/l	5.0U	84 % 46-147 %	
1,1-Dichloroethane, ug/l	5.0U	88 % 51-140 %	
Cis/Trans-1,2-Dichloroethene, ug/l	5.0U	87 % 43-136 %	
Chloroform, ug/l	5.0U	88 % 62-130 %	
1,2-Dichloroethane, ug/l	5.0U	88 % 65-131 %	
2-Butanone (MEK), ug/l	25U	73 % 42-167 %	
1,1,1-Trichloroethane, ug/l	5.0U	96 % 69-120 %	
Carbon tetrachloride, ug/l	5.0U	96 % 57-128 %	
Bromodichloromethane, ug/l	5.0U	92 % 65-125 %	
1,1,2,2-Tetrachloroethane, ug/l	5.0U	90 % 67-133 %	
1,2-Dichloropropane, ug/l	5.0U	88 % 67-128 %	

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REPORT OF RESULTS

DATE/

SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES		TIME SAMPLED	SDG#	
PARAMETER		05976-6	05976-7	05976-8
05976-6	Method Blank			SIL061
05976-7	Lab Control Standard & Recovery			SIL061
05976-8	LCS Accuracy Control Limit (%R)			SIL061
trans-1,3-Dichloropropene, ug/l	5.0U	92 %	49-136 %	
Trichloroethene, ug/l	2.7U	90 %	56-143 %	
Dibromochloromethane, ug/l	5.0U	98 %	68-126 %	
1,1,2-Trichloroethane, ug/l	5.0U	88 %	63-133 %	
Benzene, ug/l	1.2U	90 %	62-135 %	
cis-1,3-Dichloropropene, ug/l	1.0U	92 %	66-125 %	
Bromoform, ug/l	5.0U	96 %	52-148 %	
2-Hexanone, ug/l	25U	90 %	48-155 %	
4-Methyl-2-pentanone (MIBK), ug/l	25U	79 %	50-150 %	
Tetrachloroethene, ug/l	5.0U	96 %	60-148 %	
Toluene, ug/l	5.0U	88 %	68-131 %	
Chlorobenzene, ug/l	5.0U	90 %	72-127 %	
Ethylbenzene, ug/l	5.0U	94 %	74-122 %	
Styrene, ug/l	5.0U	92 %	66-130 %	
Xylenes, Total, ug/l	5.0U	93 %	73-135 %	
Surrogate - Toluene-d8	92 %	90 %	77-122 %	
Surrogate - 4-Bromofluorobenzene	94 %	92 %	74-126 %	
Surrogate - Dibromofluoromethane	94 %	90 %	70-130 %	
Dilution Factor	1	1	---	
Analysis Date	09.07.00	09.07.00	---	
Batch ID	1L0907	1L0907	---	

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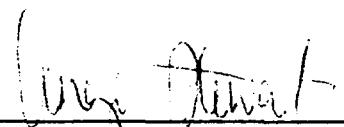
REPORT OF RESULTS

DATE/

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	TIME SAMPLED	SDG#
05976-6	Method Blank		SIL061
05976-7	Lab Control Standard & Recovery		SIL061
05976-8	LCS Accuracy Control Limit (%R)		SIL061

PARAMETER	05976-6	05976-7	05976-8
Cyanide (335.3), mg/l	0.010U	99 %	85-115 %
Dilution Factor	1	1	---
Prep Date	09.06.00	09.06.00	---
Analysis Date	09.06.00	09.06.00	---
Batch ID	0906S	0906S	---

SW-846, Test Methods for Evaluating Solid Waste, Third Edition,
September 1986, and Updates I, II, IIA, IIB, and III.
Code of Federal Regulations, Title 40, Part 136; Washington DC, July 1,
1997.


Angie Stewart, Project Manager

Final Page Of Report



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Serial Number

U70114

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Phone: (813) 885-7427 **Fax:** (813) 885-7049

PROJECT REFERENCE Leachate Treatability		PROJECT NO. 00523	PROJECT LOCATION (STATE) TN	MATRIX TYPE	REQUIRED ANALYSES						PAGE 1 OF 1				
GTL (LAB) PROJECT MANAGER Stewart		P.O. NUMBER	CONTRACT NO.								STANDARD REPORT DELIVERY				
CLIENT (SITE) PM Pat Campbell		CLIENT PHONE 615-377-4775	CLIENT FAX 615-377-4976								DATE DUE				
CLIENT NAME The Advent Group		CLIENT EMAIL J.Batz@adventgroup.org									EXPEDITED REPORT DELIVERY (SURCHARGE)				
CLIENT ADDRESS 201 Summit View Dr., 3rd Fl Brentwood TN 37027											DATE DUE				
COMPANY CONTRACTING THIS WORK (if applicable)											NUMBER OF COOLERS SUBMITTED PER SHIPMENT				
SAMPLE DATE TIME		SAMPLE IDENTIFICATION		COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMI-SOLID	AIR	NONAQUEOUS LIQUID (OL, SOLVENT, ETC)	VOC	COL	BOD	TSS	TOC	Cyanide	REMARKS
3/28/00		ozone oxidation pH 7		X					- SVOC / Herb.	- Pesticides					
3/28/00		ozone oxidation pH 7 mixed		X					- HCl (aq)	- - -				HCl (aq)	
		ozone oxidation pH 9		X					-	-					
		ozone oxidation pH 9 mixed		X					-	-					
									2	1	3	1	1	1	
RELINQUISHED BY: (SIGNATURE) Swafford		DATE 8/22/00	TIME	RELINQUISHED BY: (SIGNATURE) Dawn Baker		DATE 8/31/00	TIME 5:30pm	RELINQUISHED BY: (SIGNATURE)		DATE	TIME				
RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME				

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>J Swafford</i>	DATE 9/1/00	TIME 8:50	CUSTODY INTACT <input checked="" type="radio"/> YES <input type="radio"/> NO	CUSTODY SEAL NO.	STL-SL LOG NO. 5005976	LABORATORY REMARKS
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ATTACHMENT 7

**ANALYTICAL DATA FOR
BATCH FILTRATION TESTS**





5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165 • www.stlsavlab.com

LOG NO: S0-05067
Received: 28 JUL 00
Reported: 14 SEP 00

Mr. Pat Campbell
Advent Group
201 Summit View Drive Third Floor
Brentwood, TN 37027

Client PO. No.: 4503148706

Requisition: VEN203708

Project: LEACHATE TREATABILITY

Sampled By: Client

Code: 120900918

Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	TIME SAMPLED	SDG#
05067-7	Leachate Filtered - 0.45um	07-27-00/13:30	SIL055
05067-8	Leachate Filtered - 1.5um	07-27-00/13:30	SIL055
05067-9	Leachate Filtered - 10um	07-27-00/13:30	SIL055
05067-9-RE	Leachate Filtered - 10um	07-27-00/13:30	SIL055
PARAMETER	05067-7	05067-8	05067-9 05067-9-RE
PCB's (8082)			
Aroclor-1016, ug/l	1.0U	1.0U	1.0U
Aroclor-1221, ug/l	2.0U	2.0U	2.0U
Aroclor-1232, ug/l	1.0U	1.0U	1.0U
Aroclor-1242, ug/l	1.0U	1.0U	1.0U
Aroclor-1248, ug/l	1.0U	1.0U	1.0U
Aroclor-1254, ug/l	1.0U	1.0U	1.0U
Aroclor-1260, ug/l	1.0U	1.0U	1.0U
Surrogate - TCX	0 %X	0 %X	0 %X
Surrogate - DCB	0 %X	0 %X	0 %X
Dilution Factor	1	1	1
Prep Date	08.02.00	08.02.00	08.15.00
Analysis Date	08.14.00	08.14.00	08.19.00
Batch ID	0802Q	0802Q	0802Q
			08150
Suspended Solids (160.2), mg/l	130	100	150
Dilution Factor	1	1	1
Prep Date	07.28.00	07.28.00	07.28.00
Analysis Date	07.31.00	07.31.00	07.31.00
Batch ID	0728C	0728C	0728C



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Project: LEACHATE TREATABILITY
Sampled By: Client
Code: 120900918
Page 4

REPORT OF RESULTS

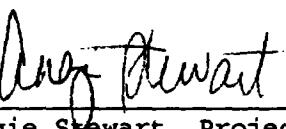
LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/	TIME SAMPLED	SDG#
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PARAMETER

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III.

X = Due to low surrogate recoveries, sample S005067-9 was reextracted and reanalyzed. both sets of data are provided. Surrogates were not recovered in samples S005067-7 and S005067-8. Due to container breakage during shipment of the samples to the laboratory there was insufficient sample volume available to reextract samples S005067-7 and S005067-8.


Angie Stewart, Project Manager

